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**Onan**

# **Parts Manual**

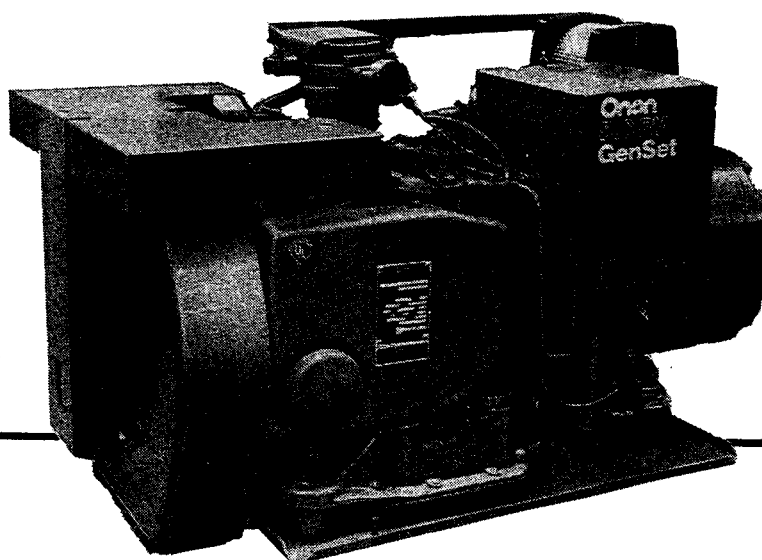
**4.0 & 5.0**

**BGA  
GenSet**

## **RV Electric Generating Set**

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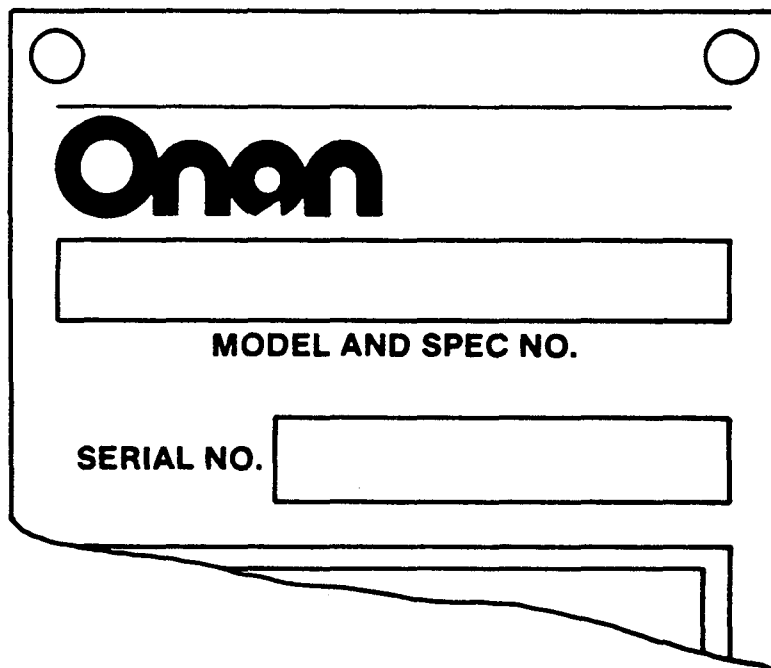
**965-0221**  
**2-86 (Specs A-D)**  
replaces  
9-83 (SPECS A-C)  
**Printed in U.S.A.**



## General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

A rectangular form with rounded corners and two circular punch holes at the top. It features the Onan logo in a bold, stylized font. Below the logo is a large rectangular box for 'MODEL AND SPEC NO.'. Below that is a smaller rectangular box for 'SERIAL NO.'. The bottom right corner of the form is folded over, revealing a second identical form underneath.

**Onan**

**MODEL AND SPEC NO.**

**SERIAL NO.**

M-1149

For handy reference, insert "YOUR" nameplate information in the spaces above.

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## Introduction

This catalog applies to the standard BGA Recreational Vehicle Generator Sets and factory installed options. Parts are arranged in groups of related items. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the *Model* and *Spec No.* from the nameplate, select *Parts* that apply to your set *Model* and *Spec No.* Unless otherwise mentioned in the description, parts are interchangeable between models. Right and left sides are determined by facing the engine end (front) of the set.

## Data Table

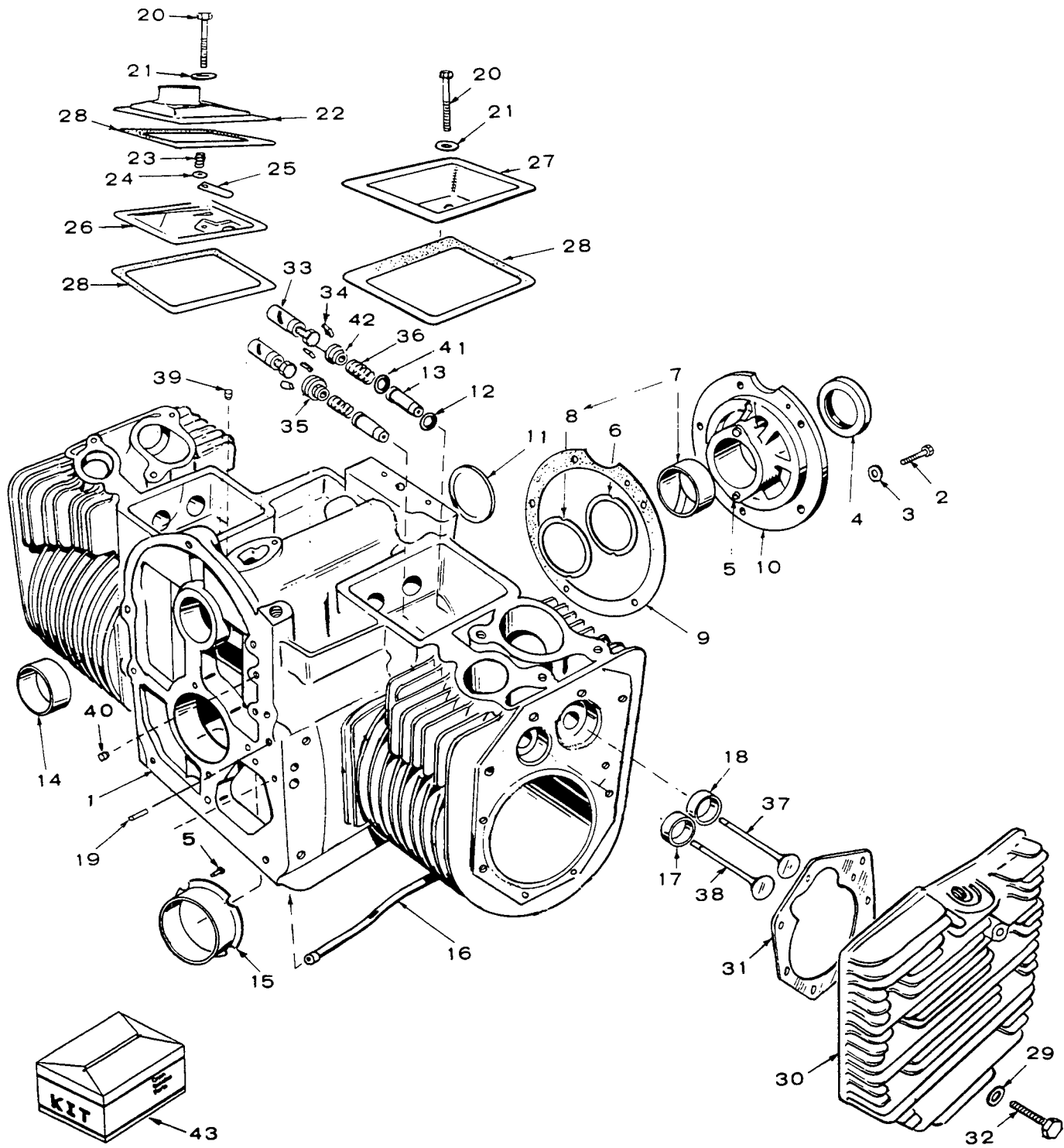
Model And Spec No.	Electrical Data			
	Watts	Hertz	Volts	Phase
5.0 BGA-3CR/*	5,000	60	120/240	1
4.0 BGA-53CR/*	4,000	50	120/240	1

\* - This Specification Letter Advances (A to B, B to C, etc.) with Manufacturing Changes.

## NOTICE!

ITEMS REFERENCED AS **OPTIONAL** INDICATE PART IS FACTORY INSTALLED AND MAY NOT BE APPLICABLE TO ALL MODELS. FOR FIELD CONVERSIONS ADDITIONAL PARTS ARE USUALLY REQUIRED.

# Cylinder Block



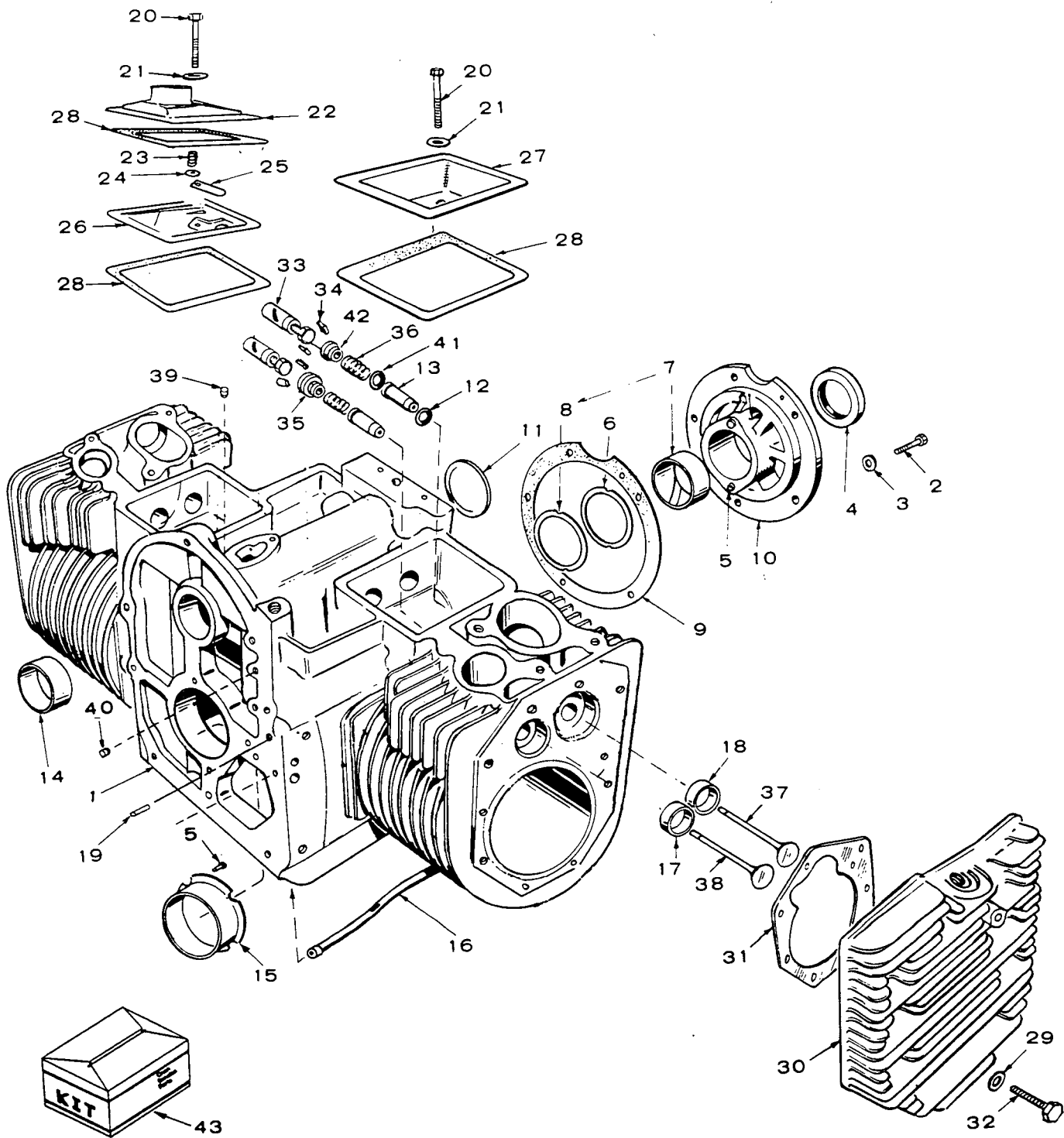
C-1017

## Cylinder Block

Ref. No.	Part No.	Qty. Used	Part Description
1	110-3148	1	Block Assembly, Cylinder (Includes Parts Marked *)
2	800-0051	5	*Screw, Cap - Hex Head (3/8-16 x 1-1/4")
3	850-0050	5	*Washer, Lock - Spring (3/8")
4	509-0041	1	*Seal, Oil - Crankshaft Rear
5	516-0072	4	*Pin, Drive - Bearing Stop
6	104-0776	As Req.	*Shim (.005")
7	BEARING, CRANKSHAFT -		REAR (Includes Thrust Washer)
	101-0450	1	*Standard
	101-0450-02	1	.002" Undersize
	101-0450-10	1	.010" Undersize
	101-0450-20	1	.020" Undersize
	101-0450-30	1	.030" Undersize
8	104-0575	2	*Washer, Thrust
9	101-0415	1	*Gasket
10	101-0439	1	*Plate, Bearing - Rear
11	517-0048	1	*Plug, Expansion - Welch
12	110-0068	2	*Gasket, Intake Valve Guide
13	GUIDE, VALVE		
	Engines w/o Intake Valve Seals		
	110-1935	2	Intake
	110-1935	2	Exhaust
	Engines with Intake Valve Seals		
	110-1935	2	*Exhaust
	110-3161	2	*Intake
14	101-0405	2	*Bearing, Camshaft
15	BEARING, CRANKSHAFT -		FRONT
	101-0432	1	*Standard
	101-0432-02	1	.002" Undersize
	101-0432-10	1	.010" Undersize
	101-0432-20	1	.020" Undersize
	101-0432-30	1	.030" Undersize
16	120-0735	1	*Tube, Oil Crankcase
17	INSERT, VALVE SEAT -		EXHAUST
	110-1824	2	*Standard
	110-1824-02	2	.002" Oversize
	110-1824-05	2	.005" Oversize
	110-1824-10	2	.010" Oversize
	110-1824-25	2	.025" Oversize
18	INSERT, VALVE SEAT -		INTAKE
	110-0197	2	*Standard
	110-0197-02	2	.002" Oversize
	110-0197-05	2	.005" Oversize
	110-0197-10	2	.010" Oversize
	110-0197-25	2	.025" Oversize
19	516-0141	2	*Pin, Gearcase Alignment
20	800-0010	2	Screw, Cap - Hex Head (1/4-20 x 1-3/4")
21	526-0063	2	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/32" Thk)

\* - Parts Included in 110-3148 Cylinder Block Assembly.

# Cylinder Block



C-1017

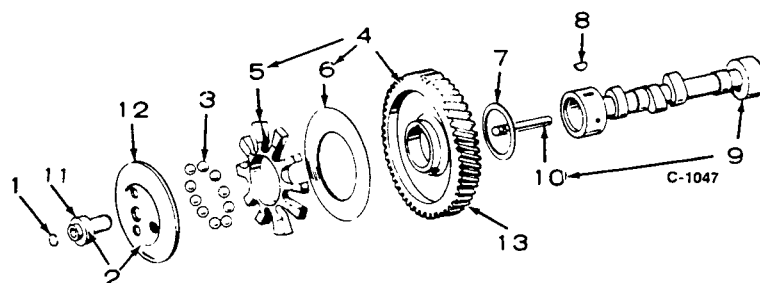


## Cylinder Block

Ref. No.	Part No.	Qty. Used	Part Description
22	110-2274	1	Cover, Valve (With Breather Port)
23	123-1174	1	Spring, Breather Valve
24	526-0018	1	Washer, Flat (17/64" ID x 5/8" OD x 1/16" Thk)
25	123-1175	1	Reed, Breather Valve
26	123-1173	1	Baffle, Breather Valve
27	110-1879	1	Cover, Valve (Without Breather Port)
28	110-1921	3	Gasket, Valve Cover
29	526-0122	18	Washer, Flat (11/32" ID x 23/32" OD x 10 Ga. Thk)
30	HEAD, CYLINDER		
	110-2562	1	Right Side
	110-2561	1	Left Side
31	GASKET, HEAD		
	110-2287	2	Standard
	110-3181	2	Graphoil (Optional)
32	SCREW, CAP - HEX HEAD		
	800-0540	12	Special (Grade 8)
	800-0541	12	Special (Grade 8)
33	TAPPET, VALVE		
	115-0006	4	Standard
	110-0006-02	4	.002" Oversize
	115-0006-05	4	.005" Oversize
34	110-0639	8	Lock, Valve Spring
35	110-0904	4	Rotocap, Valve
36	110-0539	4	Spring, Valve
37	110-1808	2	Valve, Intake
38	VALVE, EXHAUST		
	110-1955	2	Spec A, B, C
	110-1809	2	Begin Spec D
39	517-0120	1	Plug, Cylinder Block Opening
40	517-0067	1	Plug, Core Hole
41	509-0168	2	Seal, Valve - Intake
42	110-0893	2	Washer, Intake Valve Spring Retainer - Optional
43	KITS		
	168-0144	1	Gasket Kit, Carbon Removal
	168-0143	1	Gasket Kit, Engine

\* - Parts Included in 110-3148 Cylinder Block Assembly.

## Camshaft

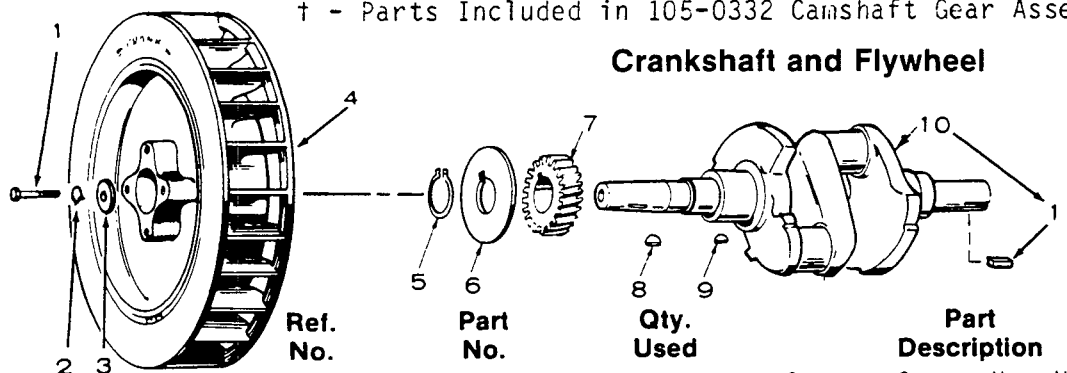


Ref. No.	Part No.	Qty. Used	Part Description
1	150-0078	1	Ring, Retaining
2	150-1695	1	Kit, Governor Cup Replacement (Includes Parts Marked *) - Spec A
3	510-0015	10	Ball, Governor
4	105-0332	1	Gear Assembly, Camshaft (Includes Parts Marked †)
5	150-1510	1	†Spacer, Flyballs
6	150-0077	1	†Plate, Flyball
7	105-0541	1	Washer, Thrust - Special
8	515-0001	1	Key, Woodruff
9	105-0376	1	Camshaft (Includes Center Pin)
10	150-0075	1	Pin, Center - Camshaft
11	150-1519	1	*Hub, Governor Cup - Begin Spec B
12	150-1520	1	*Cup and Bushing, Governor - Begin Spec B
13	105-0030	1	†Gear, Camshaft

\* - Parts Included in 150-1695 Governor Cup Kit.

† - Parts Included in 105-0332 Camshaft Gear Assembly.

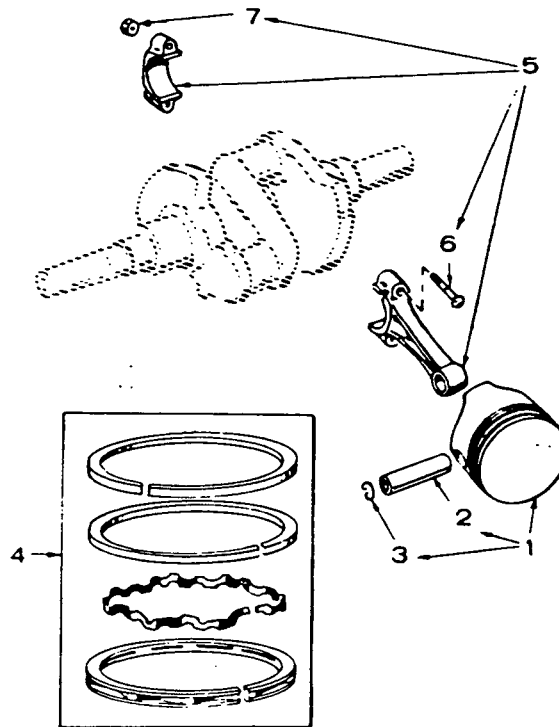
## Crankshaft and Flywheel



Ref. No.	Part No.	Qty. Used	Part Description
1	104-0170	1	Screw, Cap - Hex Head, Heat Treated - Special
2	850-0055	1	Washer, Lock - Spring (7/16)
3	526-0017	1	Washer, Flat (15/32" ID x 1-1/4" OD x 1/4" Thk)
4	134-3871	1	Flywheel
5	518-0014	1	Ring, Retaining
6	104-0043	1	Washer, Gear - Special
7	104-0032	1	Gear, Crankshaft
8	515-0227	1	*Kit, Key
9	515-0001	1	*Key, Woodruff
10	104-1348	1	Crankshaft (Kit) (Includes Parts Marked *)
11	515-0103	1	*Key, Crankshaft Stub

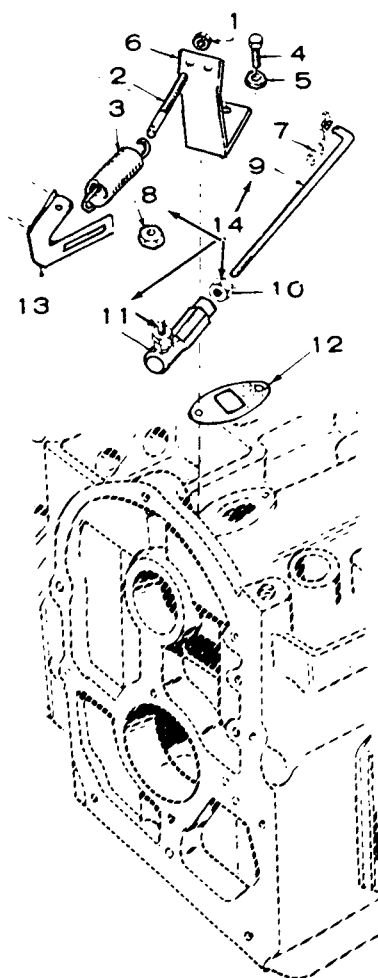
\* - Parts Included in 104-1348 Crankshaft Kit.

## Piston and Rod



Ref. No.	Part No.	Qty. Used	Part Description
1	PISTON AND PIN ASSEMBLY (Includes Retaining Rings)		
	112-0186	2	Standard
	112-0186-05	2	.005" Oversize
	112-0186-10	2	.010" Oversize
	112-0186-20	2	.020" Oversize
	112-0186-30	2	.030" Oversize
	112-0186-40	2	.040" Oversize
2	112-0229	2	Pin, Piston
3	518-0311	4	Ring, Retaining
4	RING SET, PISTON		
	113-0189	2	Standard
	113-0189-05	2	.005" Oversize
	113-0189-10	2	.010" Oversize
	113-0189-20	2	.020" Oversize
	113-0189-30	2	.030" Oversize
	113-0189-40	2	.040" Oversize
5	ROD, CONNECTING (Includes Bolt and Nut)		
	114-0257	2	Standard
	114-0257-10	2	.010" Undersize
	114-0257-20	2	.020" Undersize
	114-0257-30	2	.030" Undersize
6	114-0228	4	Bolt, Special - Connecting Rod
7	870-0137	4	Nut, Self-Locking (5/16-24)

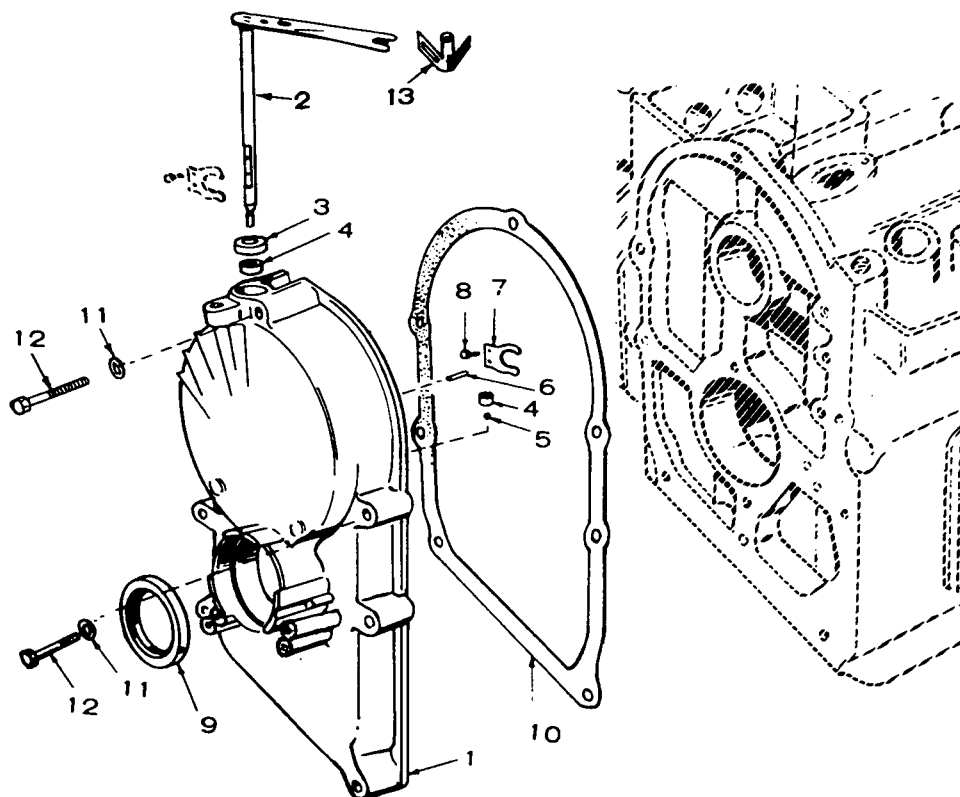
## Governor



Ref. No.	Part No.	Qty. Used	Part Description
1	870-0131	1	Nut, Hex - Self-Locking (1/4-20)
2	150-0096	1	Stud, Speed Adjustment
3	150-1612	1	Spring, Governor
4	800-0004	2	Screw, Cap - Hex Head (1/4-20 x 5/8")
5	526-0063	2	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/32" Thk)
6	150-1577	1	Bracket, Governor
7	518-0004	1	Clip, Retaining
8	870-0131	1	*Nut, Hex - Self-Locking (1/4-20)
9	150-0629	1	*Rod, Governor Arm to Carburetor
10	870-0053	1	*Nut, Hex (#10-32)
11	150-0639	1	*Joint, Ball
12	149-0003	1	Gasket, Governor Bracket
13	150-0678	1	Clip, Sensitivity Adjustment
14	150-0630	1	Linkage, Governor (Includes Parts Marked *)

\* - Parts Included in 150-0630 Governor Linkage

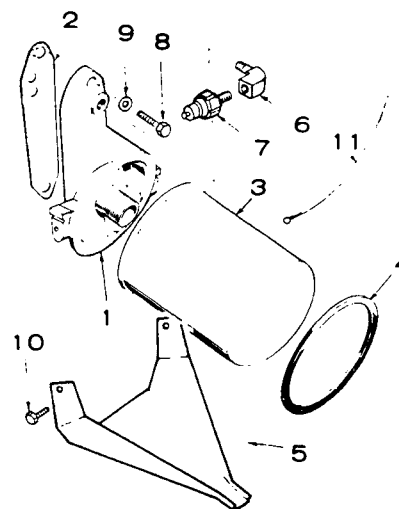
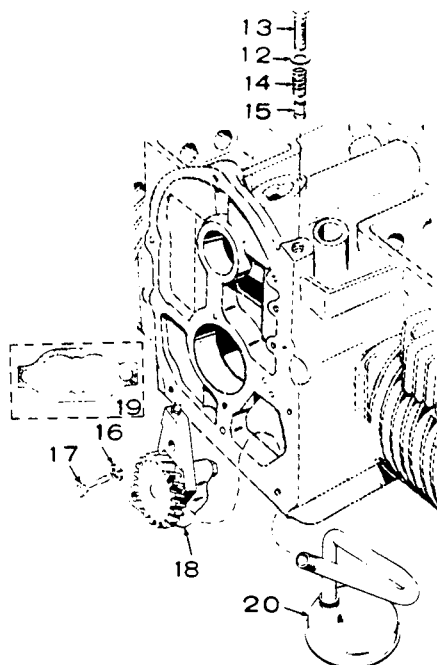
## Gearcase



Ref. No.	Part No.	Qty. Used	Part Description
1	103-0667	1	Gearcase Assembly (Includes Parts Marked *)
2	150-1542	1	*Arm and Shaft, Governor
3	509-0008	1	*Seal, Oil - Governor Shaft
4	510-0013	2	*Bearing, Needle
5	510-0014	1	*Ball, Bearing
6	516-0130	1	*Pin, Governor Cup Stop
7	150-1187	1	*Yoke, Governor
8	815-0046	2	*Screw, Machine - Pan Head (#8-32 x 3/8")
9	509-0040	1	*Seal, Oil - Crankshaft
10	103-0408	1	Gasket, Gearcase
11	526-0065	5	Washer, Flat - Copper (21/64" ID x 9/16" OD x 1/16" Thk)
12	SCREW, CAP - HEX HEAD		
	800-0032	4	5/16-18 x 1-3/4"
	800-0034	1	5/16-18 x 2-1/4"
13	150-0678	1	*Clip, Sensitivity Adjustment

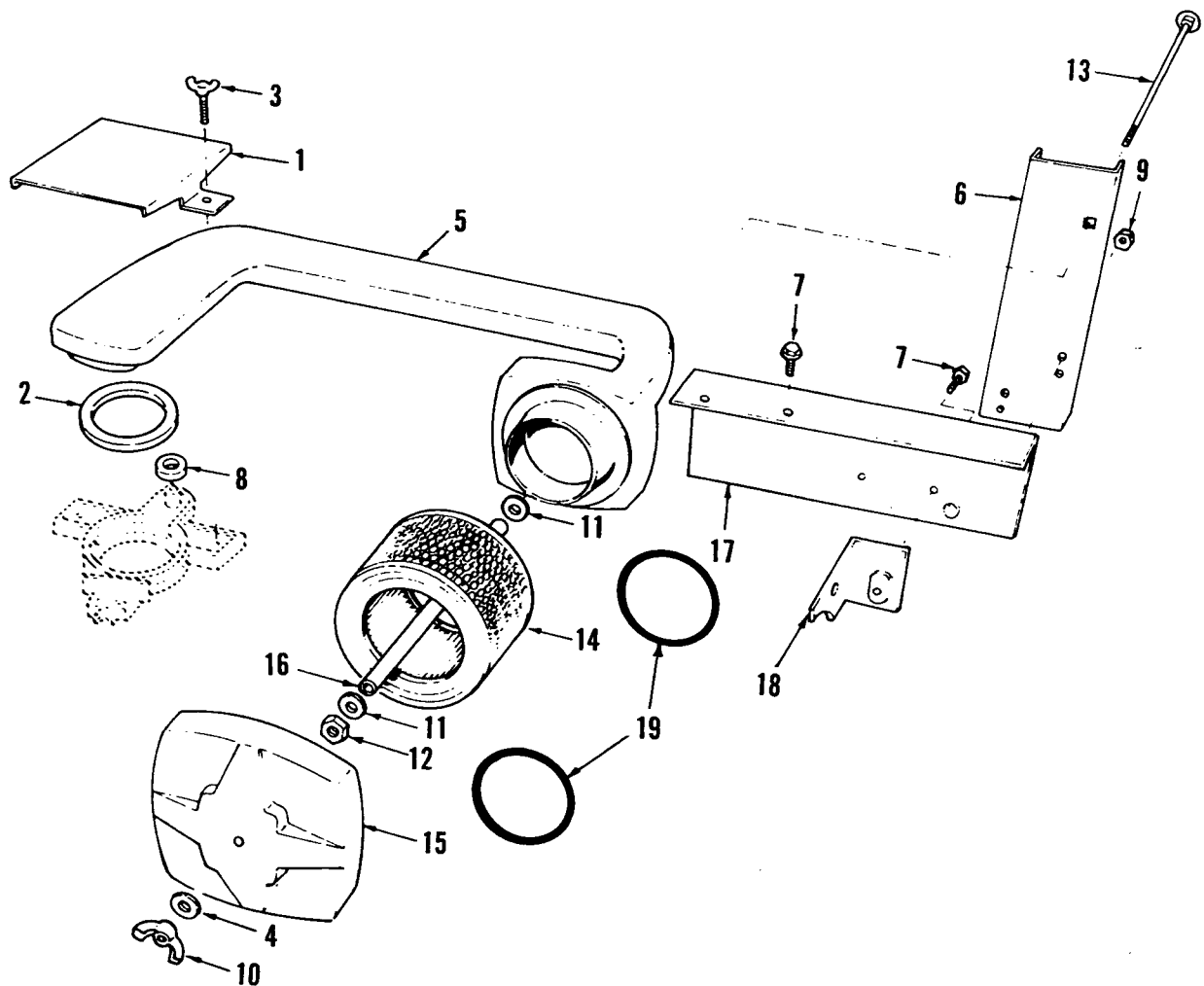
\* - Parts Included in 103-0667 Gearcase Assembly

## Oil System



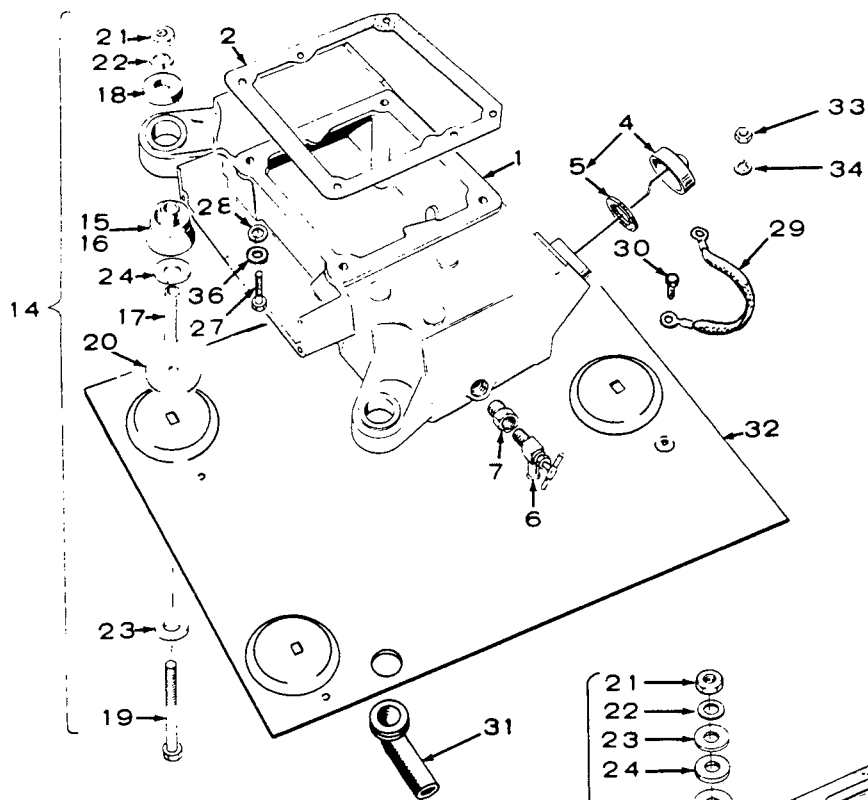
Ref. No.	Part No.	Qty. Used	Part Description
1	122-0320	1	Adapter, Oil Filter
2	122-0321	1	Gasket, Oil Filter Adapter Mounting
3	122-0645	1	Filter, Oil - Spin-on
4	122-0347	1	Seal, Air - Oil Filter
5	122-0360	1	Drain, Oil Filter
6	502-0053	1	Elbow, Street - 45°
7	309-0322	1	Switch, Low Oil Pressure
8	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
9	526-0065	2	Washer, Flat - Copper (21/64" ID x 9/16" OD x 1/16" Thk)
10	815-0194	2	Screw, Tapping - Hex Head (#10-32 x 3/8")
11	336-3377	1	Lead, Oil Pressure Switch
12	526-0066	1	Washer, Flat - Copper (25/64" ID x 9/16" OD x 1/16" Thk)
13	801-0050	1	Screw, Cap - Hex Head (3/8-24 x 1")
14	120-0140	1	Spring, Oil By-Pass Valve
15	120-0398	1	Valve, Oil By-Pass
16	850-0040	2	Washer, Lock - Spring (1/4")
17	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
18	120-0491	1	Pump, Oil (Components Not Sold Separately)
19	120-0161	1	Kit, Gasket - Oil Pump
20	CUP, OIL PUMP INTAKE		(Includes Screw Pipe and Cup)
	120-0648	1	Spec A
	120-0413	1	Begin Spec B

# Air Cleaner

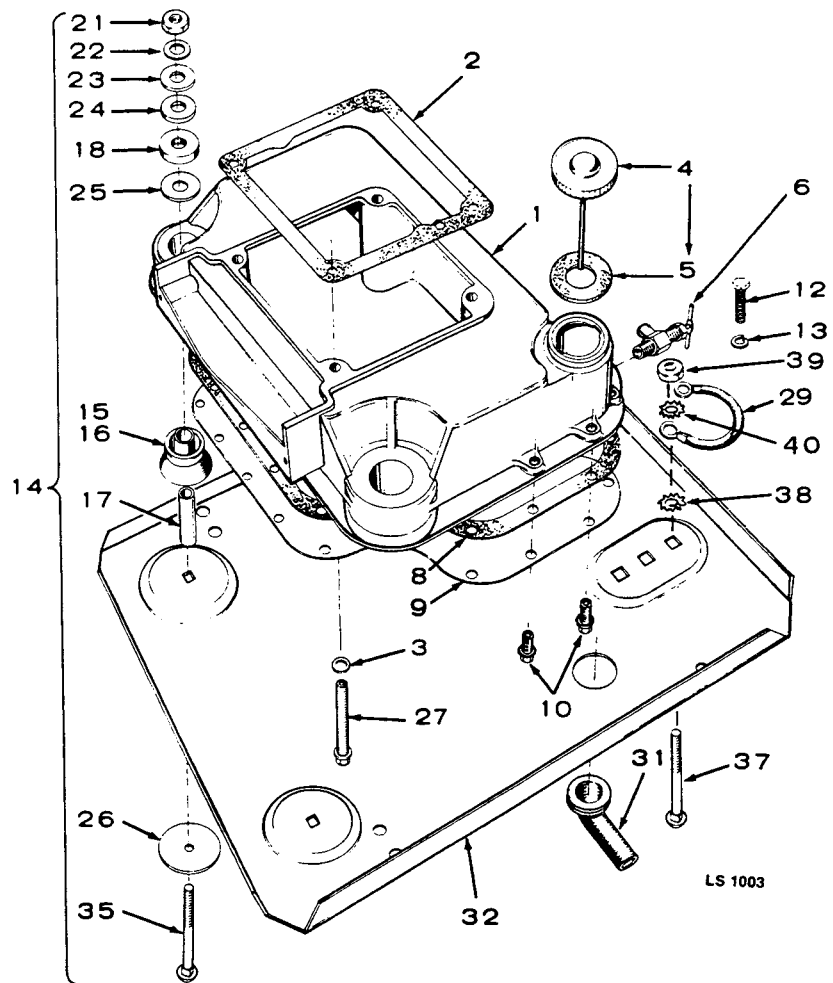


Ref. No.	Part No.	Qty. Used	Part Description
1	140-1520	1	Clamp, Air Duct
2	140-1502	1	Seal, Air Duct to Adapter
3	518-G390	2	Screw, Wing (1/4-20 x 3/4")
4	526-G021	1	Washer, Flat (17/64" ID x 3/4" OD x 1/16" Thk)
5	140-1503	1	Duct, Air Cleaner
6	140-1531	1	Bracket, Air Duct Support
7	821-0009	3	Screw, Cap - Hex Head Locking (1/4-20 x 3/8")
8	140-1521	1	Seal, Air Duct to Breather Port
9	870-G212	2	Nut, Hex - Locking (1/4-20)
10	865-G019	1	Nut, King (1/4-20)
11	526-0158	2	Washer, Flat (.261" ID x 1" OD x 1/8" Thk)
12	870-0212	1	Nut, Hex - Locking (1/4-20)
13	816-0070	1	Bolt, Carriage (1/4-20 x 6-1/2")
14	140-0495	1	Element, Air Cleaner
15	140-1504	1	Cover, Air Cleaner
16	140-1522	1	Spacer, Air Intake
17	140-1529	1	Bracket, Air Intake Duct
18	140-1528	1	Brace, Air Intake Duct
19	140-1533	2	Seal

# Oil Base and Mounting Hardware



LS 1031



LS 1003



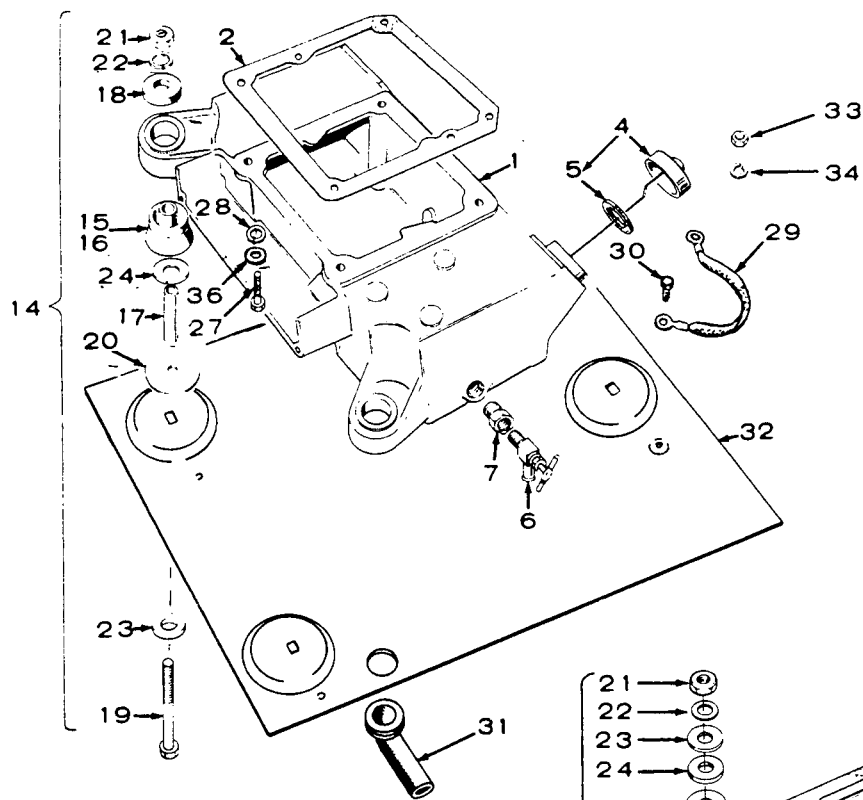
## Oil Base and Mounting Hardware

Ref. No.	Part No.	Qty. Used	Part Description
1	BASE, OIL		
	102-0944	1	Spec A (Includes Plug)
	102-0957	1	Begin Spec B (Includes Parts Marked *)
2	GASKET, OIL BASE		
	102-1200	1	Spec A
	102-1200	1	*Begin Spec B
3	526-0013	4	Washer, Flat (25/64" ID x 1" OD x 1/16" Thk) - Begin Spec B
4	CAP AND INDICATOR, OIL FILL		
	123-0489	1	Spec A
	123-1400	1	Begin Spec B
5	123-0191	1	Gasket, Oil Fill Cap
6	504-0092	1	Valve, Oil Drain
7	505-0019	1	Reducer, Pipe (1/2" x 3/8") - Spec A
8	102-1275	1	*Gasket, Oil Pan Mounting
9	102-0889	1	*Pan, Oil Base
10	821-0018	20	*Screw, Cap - HWH (1/4-20 x 5/8")
12	800-0047	1	Screw, Cap - Hex Head (3/8-16 x 5/8") - Spec A
13	856-0010	1	Washer, Lock - EIT (3/8") - Spec A
14	PACKAGE, HARDWARE MOUNTING (Includes Parts Marked #)		
	402-0435	1	Spec A
	402-0477	1	Begin Spec B
	402-0478	1	Engine End
	402-0478	1	Generator End (Left Side)
	402-0480	1	Generator End (Right Side)
15	#CUSHION, VIBRATION - ENGINE END		
	402-0283	2	Spec A
	402-0283	2	Begin Spec B
16	#CUSHION, VIBRATION - GENERATOR END		
	402-0284	1	Spec A
	402-0283	1	Begin Spec B
	402-0283	1	Left Side
	402-0283	1	Right Side
17	#SPACER, SLEEVE		
	402-0290	3	Spec A
	402-0290	2	Begin Spec B
	402-0290	1	Engine End
	402-0290	1	Generator End (Left Side)
	402-0290	1	Generator End (Right Side)
18	#SNUEBER		
	402-0282	3	Spec A
	402-0282	2	Begin Spec B
	402-0282	1	Engine End
	402-0282	1	Generator End (Left Side)
	402-0282	1	Generator End (Right Side)

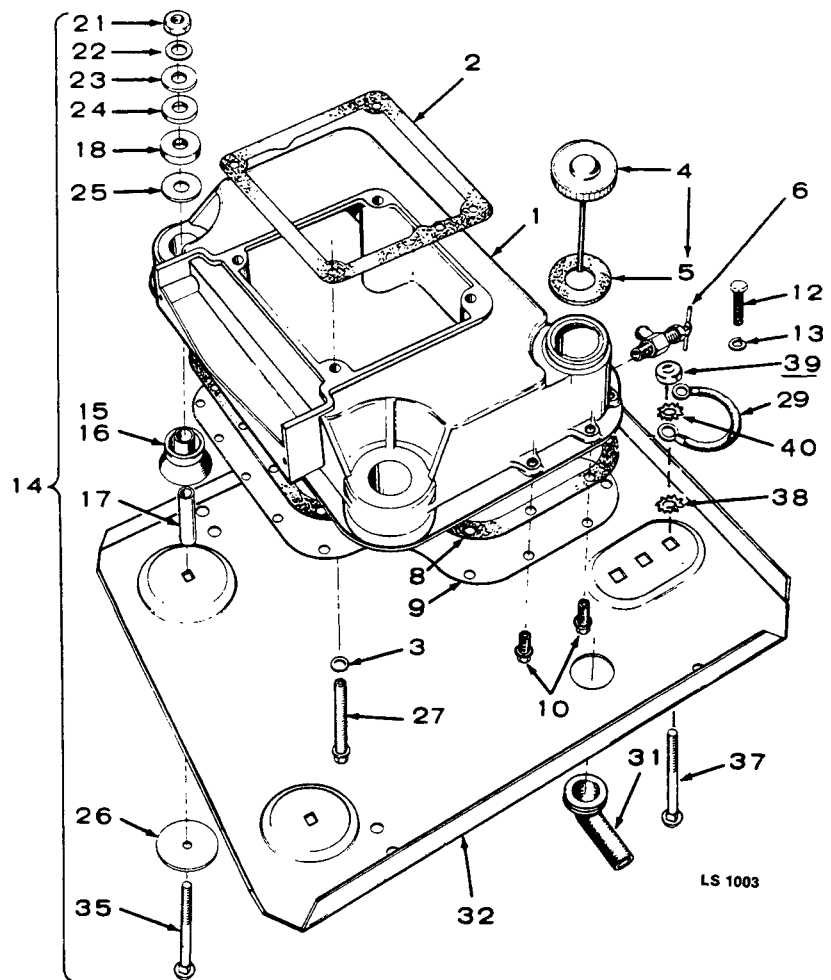
\* - Parts Included in 102-0957 Oil Base.

# - Parts Included in Hardware Mounting Package.

# Oil Base and Mounting Hardware



LS 1031



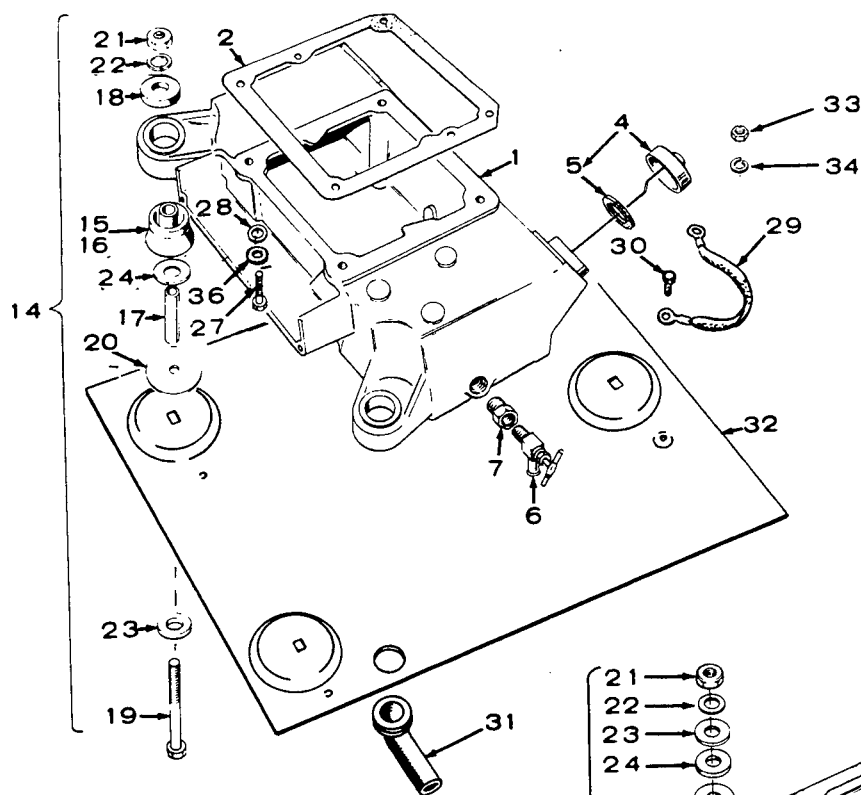
LS 1003

# Oil Base and Mounting Hardware

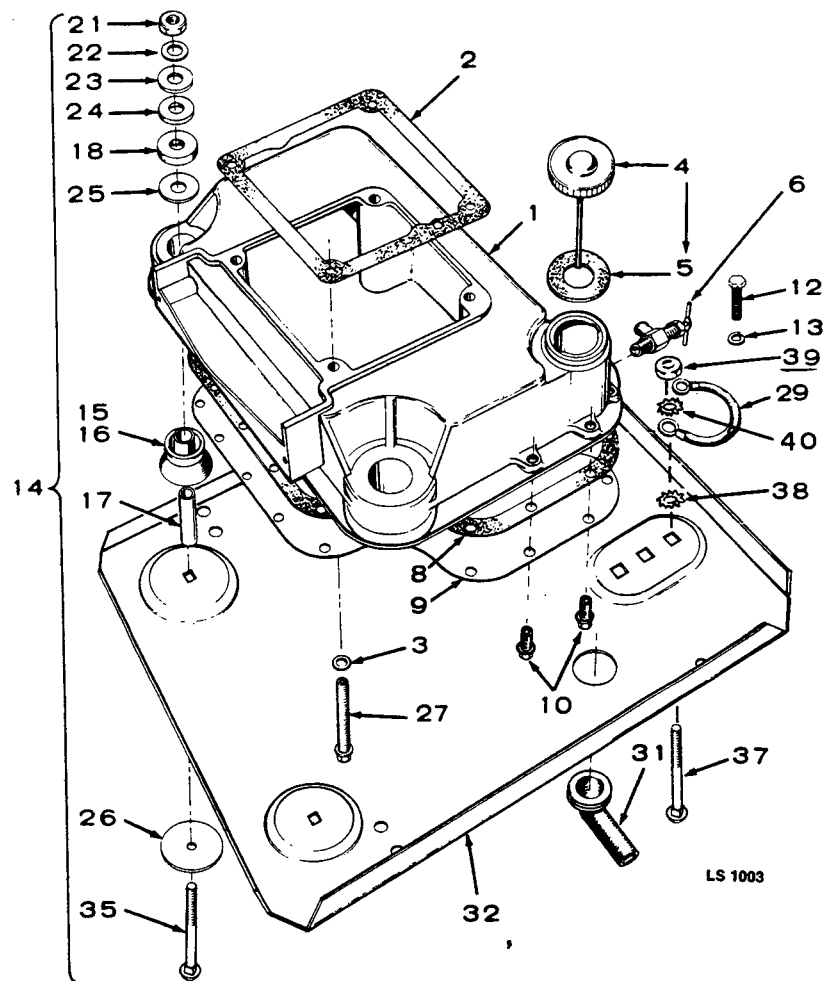
Ref. No.	Part No.	Qty. Used	Part Description
19	800-0082	3	#Screw, Cap - Hex Head (7/16-14 x 3-3/4") - Spec A
20	526-0195	3	#Washer, Flat (29/64" ID x 3-1/4" OD x 1/8" Thk) - Spec A
21	#NUT, HEX (7/16"-14)		
	862-0004	3	Spec A Begin Spec B Engine End
	862-0004	2	Generator End (Left Side)
	862-0004	1	Generator End (Right Side)
22	#WASHER, LOCK (7/16")		
	856-0012	3	Spec A Begin Spec B Engine End
	850-0055	2	Generator End (Right Side)
23	#WASHER, FLAT (29/64" ID x 1-1/2" OD x 1/8" Thk)		
	526-0014	3	Spec A Begin Spec B Engine End
	526-0014	2	Generator End (Left Side)
	526-0014	1	Generator End (Right Side)
24	#WASHER, FLAT (5/8" ID x 1-1/2" OD x 1/16" Thk)		
	526-0198	6	Spec A Begin Spec B Engine End
	526-0198	4	Generator End (Left Side)
	526-0198	2	Generator End (Right Side)
25	#WASHER, FLAT (1.12" ID x 1.75" OD x .183" Thk)		
	526-0286	1	Generator End (Left Side) - Begin Spec B
	526-0286	1	Generator End (Right Side) - Begin Spec B
26	#WASHER, FLAT (41/64" ID x 1-1/4" OD x 1/8" Thk)		
	526-0038	1	Right Side Generator End - Begin Spec B
	526-0038	2	Engine End
27	SCREW, CAP - HEX HEAD		
	800-0051	4	3/8-16 x 1-1/4" - Spec A
	800-0064	4	3/8-16 x 4-1/2" - Begin Spec B
28	850-0050	4	Washer, Lock - Spring (3/8")
29	STRAP, GROUND		
	337-0049	1	Spec A
	337-2055	1	Begin Spec B
30	815-0350	1	Screw, Tapping - Slotted Head (#10-32 x 3/8")
31	122-0345	1	Hose, Oil Drain - Optional
32	PLATE, MOUNTING		
	403-1219	1	Spec A
	403-1484	1	Begin Spec B

# - Parts Included in Hardware Mounting Package.

# Oil Base and Mounting Hardware



LS 1031



LS 1003

## Oil Base and Mounting Hardware

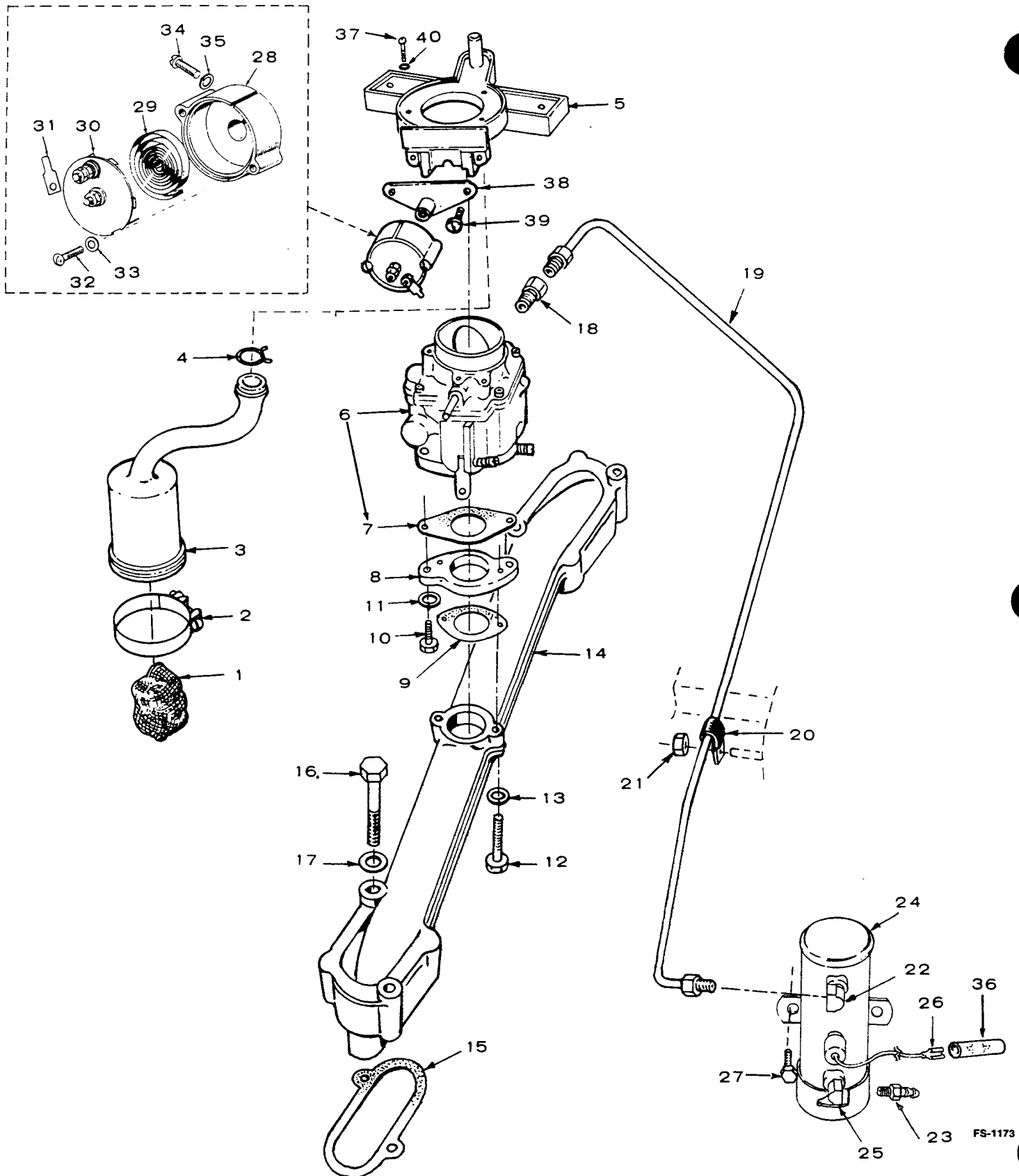
	Ref. No.	Part No.	Qty. Used	Part Description
33	862-0001	1		Nut, Hex (1/4-20) - Spec A
34	856-0008	1		Washer, Lock - EIT (5/16") - Spec A
35	#BOLT, CARRIAGE	(7/16-14 x 3-1/2")		- Begin Spec B
	816-0206	2		Engine End
	816-0206	1		Generator End (Left Side)
	816-0206	1		Generator End (Right Side)
36	526-0030	4		Washer, Flat - Begin Spec C (13/32" ID x 7/8" OD x 1/8" Thk)
37	816-0197	1		†Bolt, Carriage (7/16-14 x 1-1/4")
38	856-0016	1		†Washer, Lock - EIT (5/8")
39	862-0004	1		†Nut, Hex (7/16-14)
40	856-0012	1		†Washer, Lock - EIT (9/16")
41	850-0055	1		Washer, Lock (7/16")

\* - Parts Included in 102-0957 Oil Base.

# - Parts Included in Hardware Mounting Package.

† - Use with 337-2055 Ground Strap.

# Fuel System

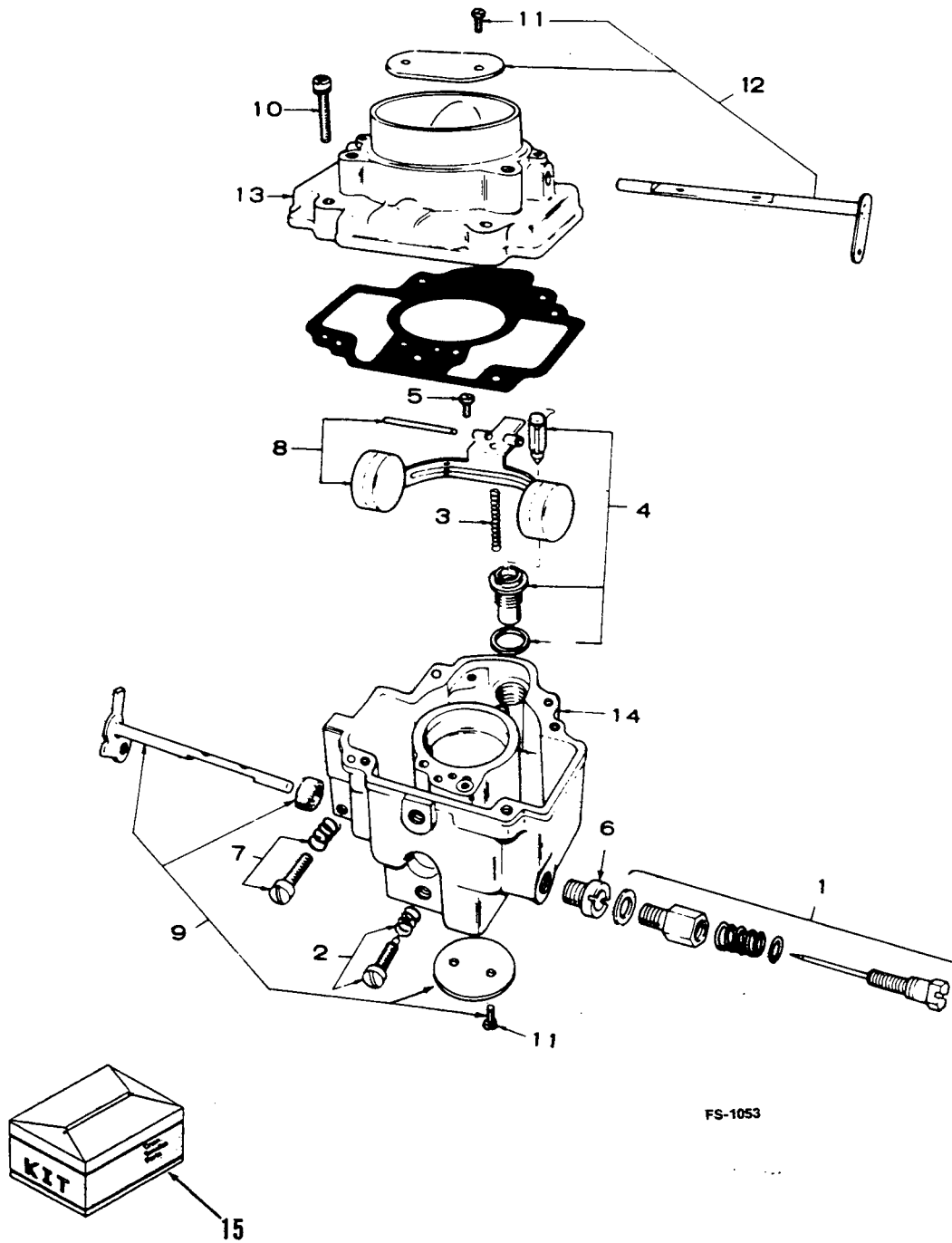


FS-1173

## Fuel System

Ref. No.	Part No.	Qty. Used	Part Description
1	123-1417	1	Filter, Breather Tube
2	503-0280	1	Clamp, Hose
3	123-1277	1	Tube, Breather
4	503-0769	1	Clamp, Hose
5	140-1492	1	Adapter, Air Duct
6	CARBURETOR, COMPLETE (See Separate Page for Components) (Includes Mounting Gasket)		
	146-0308	1	WALBRO
	146-0419	1	NIKKI
7	154-0733	1	Gasket, Carburetor to Adapter
8	154-1977	1	Adapter, Carburetor
9	145-0438	1	Gasket, Manifold to Carburetor Adapter
10	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 7/8")
11	850-0045	2	Washer, Lock - Spring (5/16")
12	800-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-3/8")
13	850-0040	2	Washer, Lock - Spring (1/4")
14	154-2206	1	Manifold, Intake
15	154-1446	2	Gasket, Intake Manifold
16	800-0033	4	Screw, Cap - Hex Head (5/16-18 x 2")
17	850-0045	4	Washer, Lock - Spring (5/16")
18	502-0003	1	Connector, Inverted Male
19	149-1531	1	Line, Fuel
20	518-0350	1	Clamp, Loop - Insulated
21	862-0015	1	Nut, Hex (5/16-18)
22	502-0002	1	Elbow, Inverted Male
23	502-0395	1	Connector, Hose
24	149-1828	1	Pump, Fuel (Electric)
25	ELBOW, 90°		
	502-0313	1	Begin Spec B
	502-0196	1	Spec A
26	332-0529	1	Terminal, Fuel Pump Lead
27	821-0008	2	Screw, Cap - Self-Locking (1/4-20 x 5/16" lg)
28	153-0058	1	Housing, Choke
29	153-0017	1	Bi-Metal, Choke
30	153-0114	1	Element & Choke Cover
31	332-0527	1	Terminal, Lug
32	815-0285	2	Screw, Machine - Round Head W/ET (#8-32 x 5/16")
33	526-0062	2	Washer, Flat - Brass (.02" ID x 1/2" OD x 1/16" Thk)
34	815-0110	1	Screw, Machine - Fillister Head (#10-32 x 7/8")
35	850-0030	1	Washer, Lock - Spring (#10)
36	332-0556	1	Connector, Fuel Pump Lead
37	804-0017	3	Screw, Socket Head (#10-32 x 1/2" lg)
38	153-0499	1	Adapter, Choke
39	815-0359	2	Screw, Self-Tapping - Hex Head (#10-32 x 7/8" lg)
40	509-0145	1	Seal, "O" Ring

# Carburetor Parts (Walbro) Gasoline





# **Carburetor Parts (Walbro) Gasoline**

Ref. No.	Part No.	Qty. Used	Part Description
	146-0308	1	Carburetor - Complete (Includes Mounting Gasket)
	146-0220	1	*Kit, Gasket Replacement
1	146-0248	1	*Power Needle Package
2	146-0209	1	*Idle Needle Package
3	146-0208	1	*Spring Buoyancy
4	146-0289	1	*Valve and Seat Package
5	146-0222	1	*Screw, Lever Pin
6	146-0243	1	Jet, Power
7	146-0261	1	Idle Speed Adjusting Screw Package
8	146-0262	1	Float Package
9	146-0267	1	Throttle Shaft Package
10	146-0247	4	Screw, Body to Intake
11	146-0142	4	Screw, Valve Mounting
12	146-0265	1	Choke Shaft Package
13		1	Intake, Air (Not Sold Separately)
14		1	Body (Not Sold Separately)
15	146-0290	1	Kit, Repair (Includes Parts Marked *)

\* - Parts Included in 146-0290 Repair Kit.



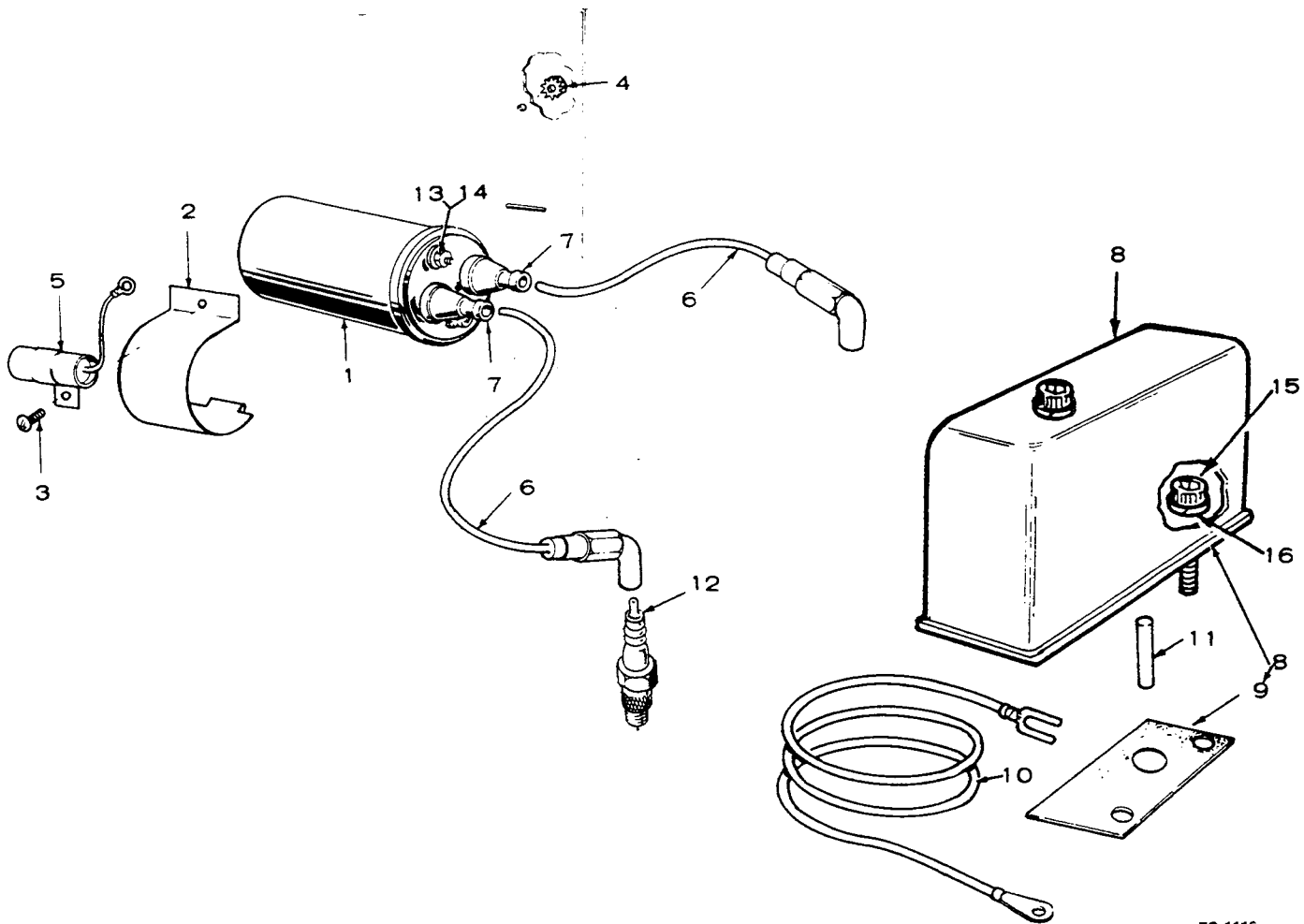
# **Carburetor Parts (Nikki) Gasoline**

Ref. No.	Part No.	Qty. Used	Part Description
	146-0419	1	Carburetor, Complete (Includes Mounting Gasket)
1	146-0417	1	Choke, Shaft Kit
2	146-0418	1	Shaft, Throttle (Kit)
3	146-0322	1	*Screw and Plug Kit
4	146-0326	1	*Gasket, Kit
5	146-0325	1	Float, Kit
6	146-0329	1	*Valve and Seat Kit
7	146-0343	1	Jet, Power
8	146-0420	1	Jet, Idle
9	146-0335	1	*Needle, Idle Adjusting
10	146-0331	1	*Spring, Idle Adjusting Needle
11		1	Intake, Air (Not Sold Separately)
12		1	Body (Not Sold Separately)
13	154-0733	1	*Gasket, Carburetor Mounting
14	146-0327	1	Variable Jet Kit - Optional (High Altitude Application) (Includes Parts Marked +)
15	146-0343	1	+Power Jet, Variable (Includes Gasket)
16	146-0340	1	+Retainer, Power Needle (Includes Gasket)
17	146-0341	1	+Spring, Power Needle
18	146-0342	1	+Needle Complete, Power
19	145-0438	1	*Gasket, Carburetor Mounting
20	146-0356	1	Kit, Repair (Includes Parts Marked *)

\* - Parts Included in 146-0356 Repair Kit.

+ - Parts Included in 146-0327 Variable Jet Kit.

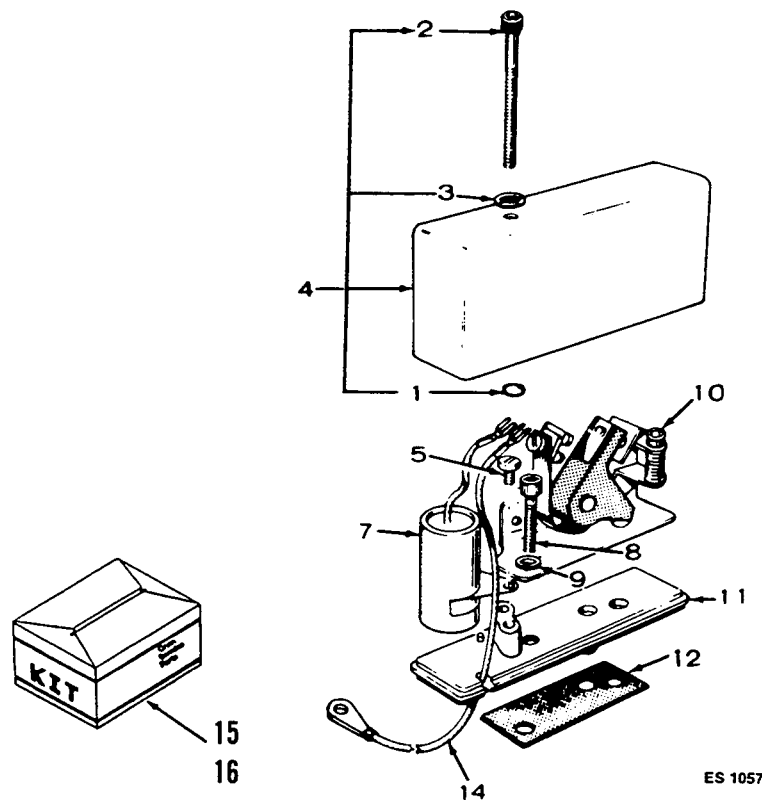
## Ignition System



ES-1116

Ref. No.	Part No.	Qty. Used	Part Description
1	166-0643	1	Coil, Ignition
2	166-0588	1	Clamp, Coil
3	815-0350	1	Screw, Cap - Hex Head (#10-32 x 1/2")
4	870-0131	1	Nut, Hex - W/ET (#10-32)
5	312-0017	1	Condenser
6	167-1602	2	Cable, Spark Plug
7	160-0558	2	Nipple, Spark Plug Cable
8	160-1303	1	Box Assembly, Breaker (See Separate Page for Components) Includes Mounting Gasket
9	160-1150	1	Gasket, Breaker Box Mounting
10	336-2378	1	Lead, Coil to Breaker Points
11	160-1151	1	Plunger, Breaker Points
12	PLUG, SPARK		
	167-0237	2	Spec A
	167-0298	2	Begin Spec B
13	166-0554	2	Nut, Hex (Special)
14	850-2005	2	Washer, Lock - Spring (Metric)
15	802-0034	2	Screw, Cap - Socket Head (1/4-20 x 3/4")
16	850-0038	2	Washer, Lock - Spring (1/4")

## Ignition Breaker Box Assembly



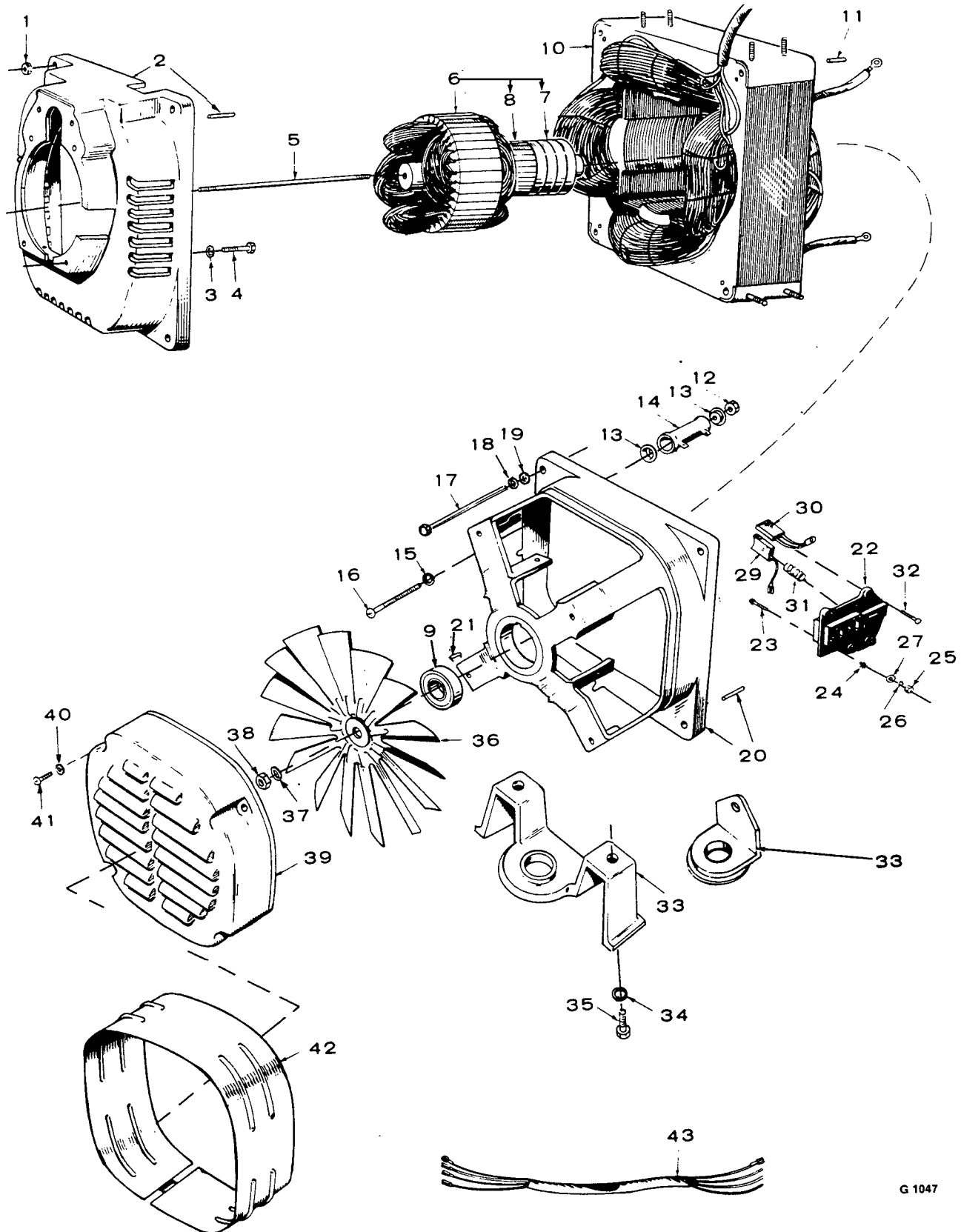
ES 1057

Ref. No.	Part No.	Qty. Used	Part Description
	160-1303	1	Box Assembly, Breaker - Complete (Includes Parts Marked *)
1	509-0065	1	*Retainer, Breaker Box Cover Screw
2	802-0022	1	*Screw, Cap - Socket Head (#10-24 x 1-1/2")
3	526-0008	1	*Washer, Flat (13/64" ID x 7/16" OD x 1/32" Thk)
4	160-1285	1	*Cover, Breaker Box (Includes Screw, Washer and Retainer)
5	815-0358	1	*Screw, Cap - Hex Head (#8-32 x 5/16")
7	312-0246	1	†*Condenser, Ignition
8	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
9	850-0038	2	*Washer, Lock - Spring (1/4")
10	160-1183	1	†*Point Assembly, Breaker
11	160-1219	1	*Base, Breaker Box
12	160-1150	1	*Gasket, Breaker Box
14	336-2378	1	Lead, Breaker Box to Coil
15	160-1311	1	Kit, Ignition Tune-Up (Includes Parts Marked †)
16	542-8223	1	Kit, Ignition Tune-Up (Includes Points, Condenser and Spark Plugs)

\* - Parts Included in 160-1303 Breaker Box Assembly.

† - Parts Included in 160-1311 Ignition Tune-Up Kit.

# Generator



G 1047

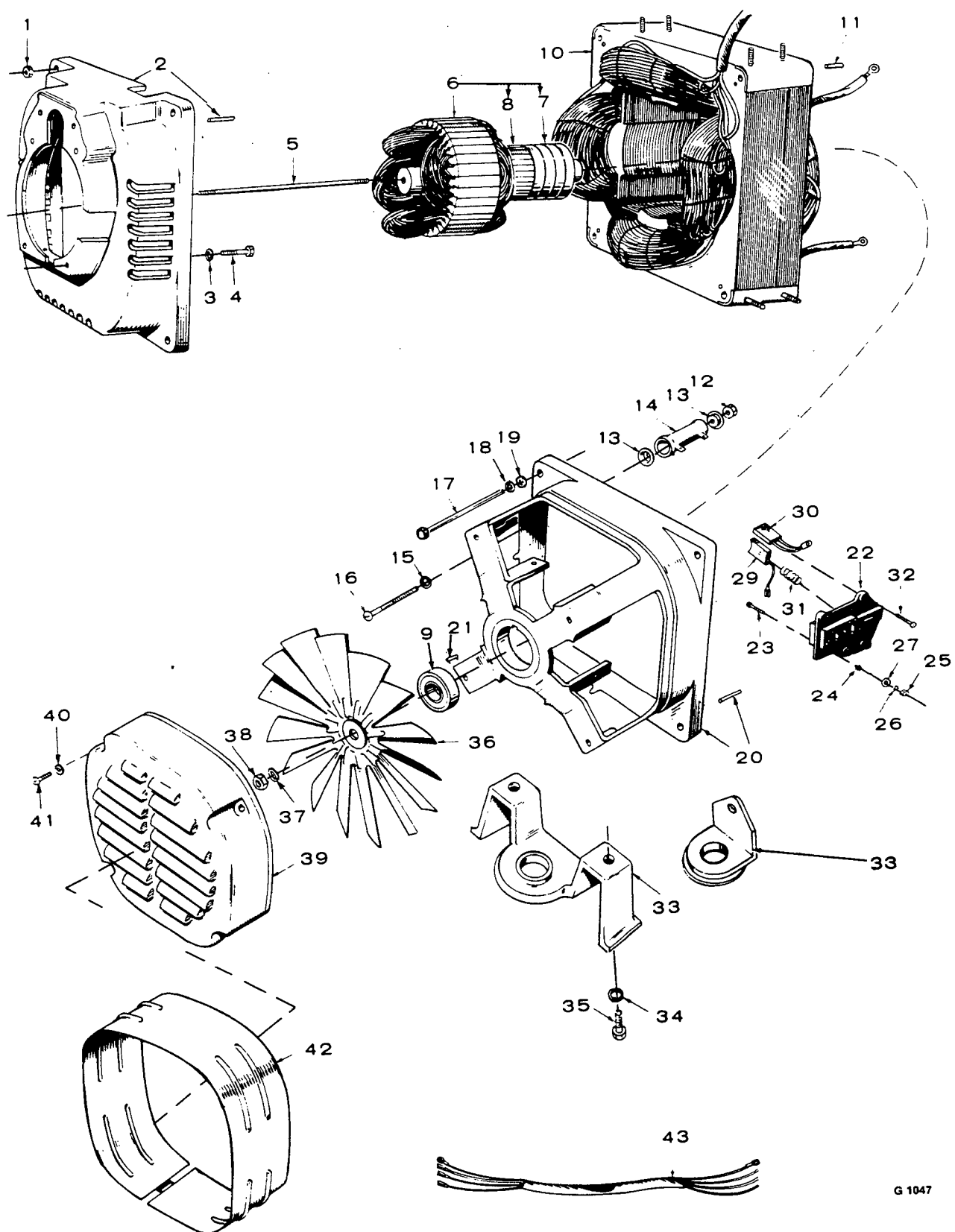
# Generator

Ref. No.	Part No.	Qty. Used	Part Description
1	862-0015	4	Nut, Hex (5/16-18)
2	231-0164	1	Adapter, Generator to Engine (Includes 4-516-0196 Alignment Pins)
3	850-0050	4	Washer, Lock - Spring (3/8")
4	800-0050	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
5	520-0733	1	Stud, Armature Through
6	ARMATURE ASSEMBLY	(Includes Parts Marked *)	
	201-2407	1	60 Hertz
	201-2408	1	50 Hertz - Spec A
	201-2506	1	50 Hertz, Begin Spec B
7	204-0110	1	*Ring, Collector
8	203-0152	1	*Commutator
9	510-0047	1	*Bearing, Ball
10	STATOR		
	220-1821	1	60 Hertz
	220-1822	1	50 Hertz
11	516-0196	8	Pin, Alignment
12	860-0008	1	Nut, Hex (#8-32)
13	304-0014	2	Washer, Centering - Resistor
14	353-0060	1	Resistor, Fixed (7.5-Ohm, 25 Watt)
15	850-0025	1	Washer, Lock - Spring (#8)
16	812-0092	1	Screw, Machine - Round Head (#8-32 x 3/4")
17	800-0044	4	Screw, Cap - Hex Head (5/16-18 x 5")
18	850-0045	4	Washer, Lock - Spring (5/16")
19	526-0115	4	Washer, Flat (11/32" ID x 11/16" OD x 1/16" Thk)
20	211-0364	1	Bell, End (Includes 4-516-0196 Alignment Pins)
21	232-0596	1	Clip, Bearing Retainer
22	BLOCK, GENERATOR BRUSH	(Includes Parts Marked †)	
	212-0361	1	Top
	212-0345	1	Right Side
	212-0352	1	Bottom
	212-0353	1	Left Side
23	815-0341	4	*Screw, Cap - Hex Head - Brass (#10-32 x 1")
24	853-0008	8	†Washer, Lock - ET (#10)
25	871-0010	4	†Nut, Hex - Brass (#10-32)
26	853-0008	4	†Washer, Lock - ET (#10)
27	526-0049	4	†Washer, Flat - Brass (.200" ID x 7/16" OD x 1/32" Thk)
29	214-0095	4	†Brush, Commutator (DC)
30	214-0096	4	†Brush, Collector Ring (AC)
31	212-1232	12	†Spring, Brush
32	815-0359	15	Screw, Cap - Hex Head - Locking (#10-32 x 7/8")

\* - Parts Included in Armature Assembly.

† - Parts Included in Generator Brush Blocks.

# Generator



G 1047



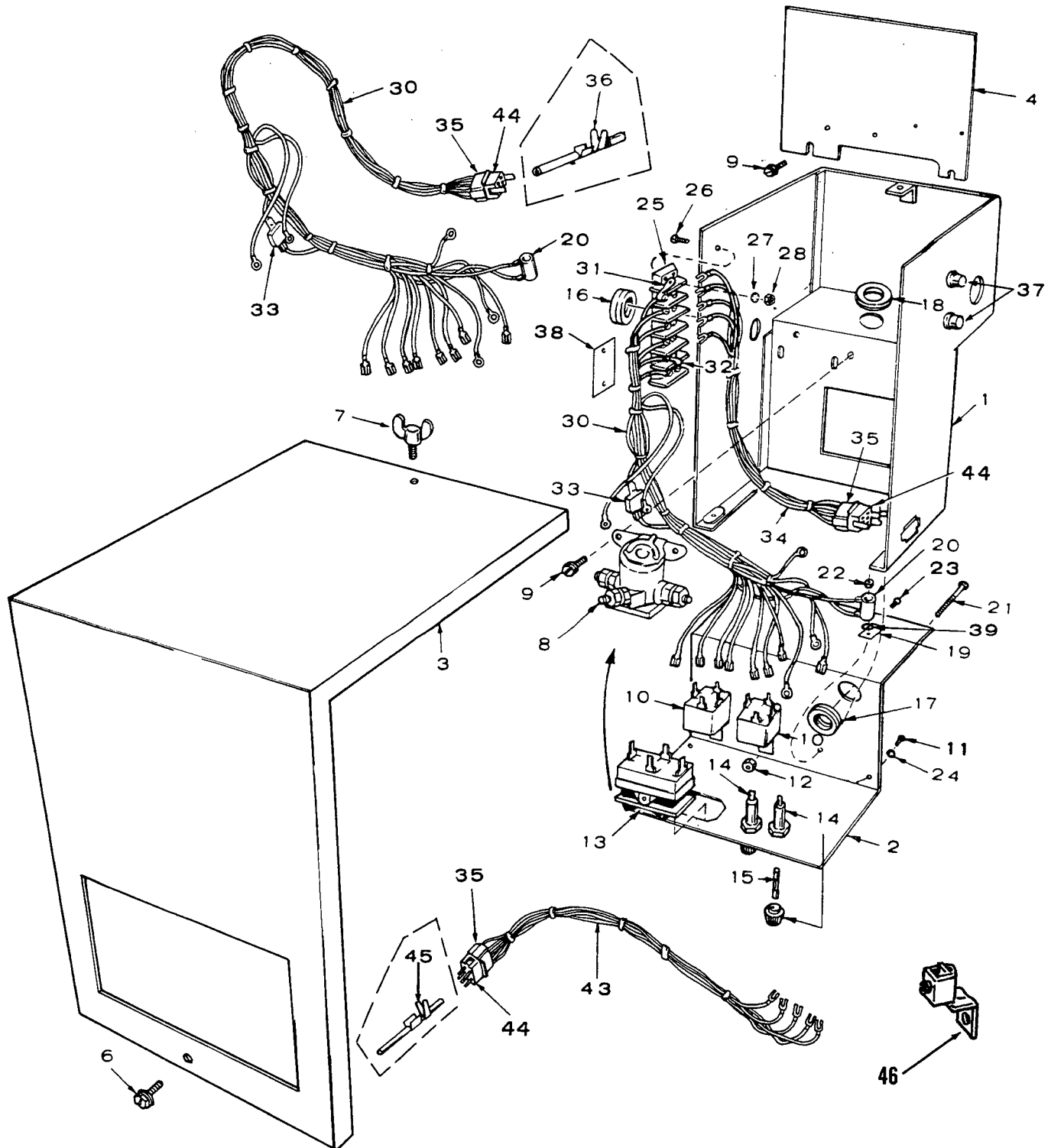
## Generator

Ref. No.	Part No.	Qty. Used	Part Description
33	SUPPORT, GENERATOR		
	232-2619	1	Spec A
	402-0475	2	Begin Spec B
34	850-0050	2	Washer, Lock - Spring (3/8")
35	800-0051	2	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
36	205-0090	1	Fan, Cooling
37	850-0055	1	Washer, Lock - Spring (7/16")
38	870-0203	1	Nut, Hex (7/16-20)
39	232-2107	1	Cover, Generator
40	850-0040	2	Washer, Lock - Spring (1/4")
41	812-0156	2	Screw, Machine - Round Head (1/4-20 x 1-1/2")
42	234-0362	1	Wrapper, Generator
43	338-1099	1	Harness, Wiring

\* - Parts Included in Armature Assembly.

† - Parts Included in Generator Brush Blocks.

# Control



SC 1009

## Control

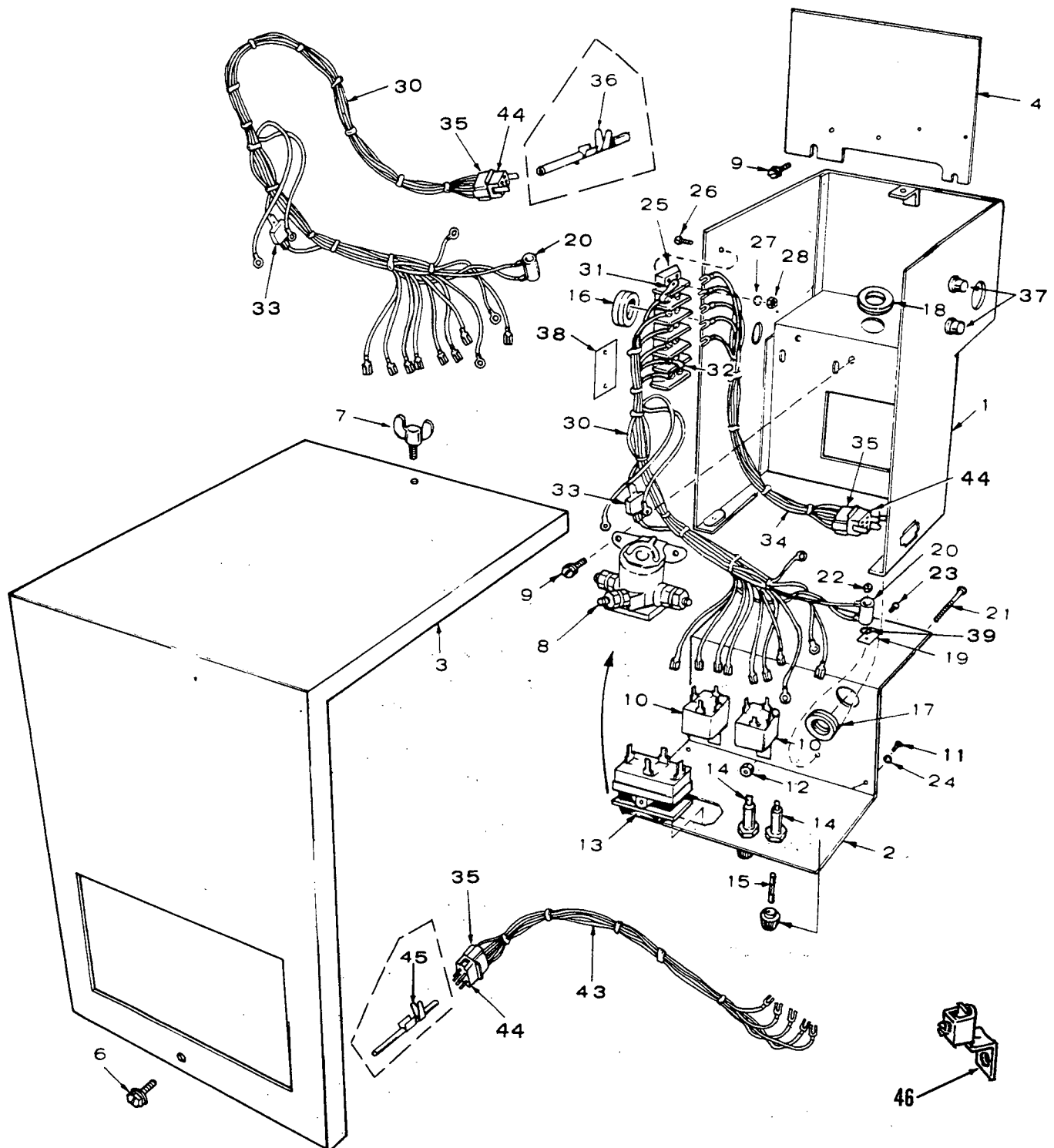
Ref. No.	Part No.	Qty. Used	Part Description
1	301-4446	1	Box, Control
2	301-4442	1	Panel, Control
3	COVER, CONTROL (Includes AC Schematic)		
	301-4466	1	Prior to Serial #D783330433 During Spec A
	301-4543	1	Begin Serial #D783330433 During Spec A
	301-4894	1	Begin Spec B
4	301-4441	1	Plate, Control
6	815-0350	1	Screw, Tapping - Slotted HWH (#10-32 x 3/8")
7	518-0056	1	Screw, Wing (#10-32 x 1/2")
8	RELAY, START SOLENOID		
			Spec A
	307-1498	1	Sets Without Start-Disconnect
	307-1617	1	Sets With Start-Disconnect
	307-1617	1	Begin Spec B
9	821-0009	6	Screw, Cap - HWH (1/4-20 x 3/8")
10	307-1575	2	†*Relay, Ignition (Crank Ignition and Run Ignition)
11	815-0340	2	Screw, Machine - Round Head (#10-32 x 3/8")
12	870-0131	2	Nut, Hex with ET (#10-32)
13	308-0383	1	Switch, Start-Stop
14	321-0175	2	Holder, Fuse
15	321-0174	2	Fuse (5 Ampere)
16	508-0208	1	Bushing, Insulating - Nylon (3/4" Hole)
17	331-0088	1	Bushing, Insulating
18	508-0191	1	Bushing, Insulating - Nylon (7/8" Hole)
19	304-0580	1	Insulator, Resistor Mounting
20	RESISTOR		
			Spec A
	352-0160	1	*†120-Ohm, 5 Watt - Sets Without Start-Disconnect
	352-0161	1	°100-Ohm, 5 Watt - Sets with Start-Disconnect
	352-0161	1	°Begin Spec B
	304-0431	1	*150-Ohm, 5 Watt - Begin Spec A
21	812-0087	1	Screw, Machine - Round Head (#8-32 x 1-1/2")
22	870-0221	2	Nut, Hex with ET (#8-32)
23	821-0004	5	Screw, Cap - Hex Head (#10-32 x 5/16")
24	856-0003	2	Washer, Lock - EIT (#10)

\* - Parts Included in 338-1084 Wiring Harness.

† - Parts Included in 338-1169 Wiring Harness.

° - Parts Included in 338-1265 Wiring Harness.

# Control



SC 1009

# Control

Ref. No.	Part No.	Qty. Used	Part Description
25	BLOCK, TERMINAL		
	332-0699	1	*6 Place - Prior to Serial #D783330433 During Spec A
	332-0254	1	4 Place
26	812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")
27	853-0003	2	Washer, Lock - ET (#6)
28	860-0005	2	Nut, Hex (#6-32)
30	HARNESS WIRING - CONTROL		
			Prior to Serial #D783332233 During Spec A (Includes Parts Marked *)
	338-1084	1	Sets Without Start-Disconnect
	338-1084	1	Sets With Start-Disconnect (Also Order Qty. 1 -352-0161 Resistor)
			Begin Serial #D783332233 During Spec A
	338-1169	1	Sets Without Start-Disconnect (Includes Parts Marked †)
	338-1265	1	Sets With Start-Disconnect (Includes Parts Marked °)
	338-1265	1	Begin Spec B (Includes Parts Marked °)
31	323-1088	3	Nut, Wire
32	332-1043	2	*Jumper, Terminal Block
33	357-0030	1	*†°Rectifier, Diode
34	338-1078	1	Harness, Wiring (Includes Parts Marked +) - Prior to Serial #D783330433 During Spec A
35	323-0440	1	†°+Housing, Connector Pin
36	323-0488	5	†°+Pin, Connector - Female
37	CIRCUIT, BREAKER		
			Spec A
	320-0734	1	Kit, Replacement (Replaces Qty. 1 - 40 Amp Breaker) (Includes Parts Marked #)
			Begin Spec B
			60 Hertz Sets
	320-0544	1	#30 Amp Breaker
	320-0692	1	#20 Amp Breaker
	320-0692	2	50 Hertz Sets
38	STRIP, TERMINAL BLOCK MARKER		
	332-2099	1	Spec A
			Begin Spec B
	332-2099	1	60 Hertz Sets
	332-2288	1	50 Hertz Sets

\* - Parts Included in 338-1084 Wiring Harness.

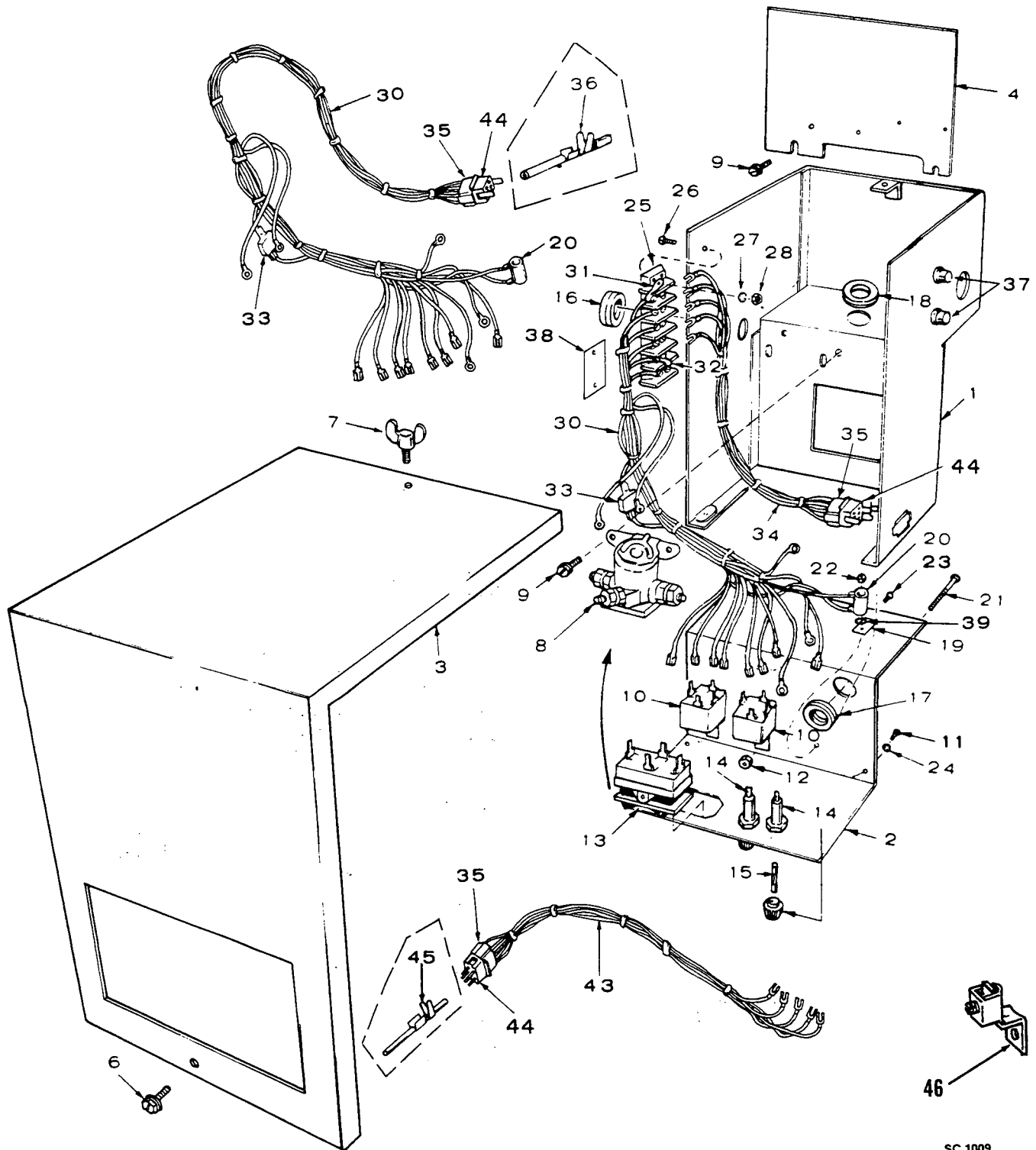
† - Parts Included in 338-1169 Wiring Harness.

° - Parts Included in 338-1265 Wiring Harness.

+ - Parts Included in 338-1078 Wiring Harness

# - Parts Included in 320-0734 Circuit Breaker Kit

# Control



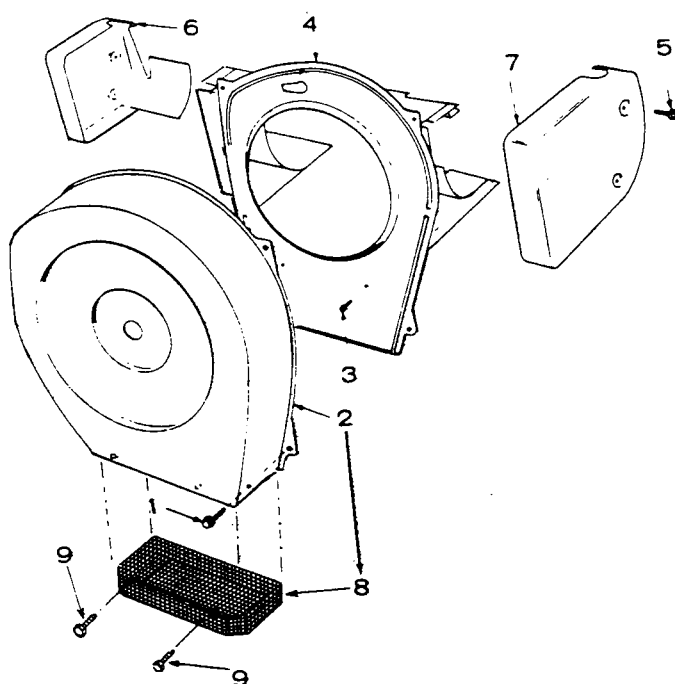
SC 1009

## Control

Ref. No.	Part No.	Qty. Used	Part Description
39	508-0015	1	Washer, Fibre
43	HARNESS, WIRING - REMOTE (Includes Parts Marked %)		
	338-1082	1	6 Inches Long
	338-1080	1	10 Ft. - Optional
	338-1081	1	30 Ft. - Optional
44	323-0400	1	%Housing, Connector Pin
45	323-0500	5	%Pin, Connector - Male
46	332-0142	1	Terminal, Solderless

- \* - Parts Included in 338-1084 Wiring Harness.
- † - Parts Included in 338-1169 Wiring Harness.
- ° - Parts Included in 338-1265 Wiring Harness.
- + - Parts Included in 338-1078 Wiring Harness
- # - Parts Included in 320-0734 Circuit Breaker Kit.
- % - Parts Included in 338-1080, 338-1081, 338-1082 Wiring Harness.

## Air Housing

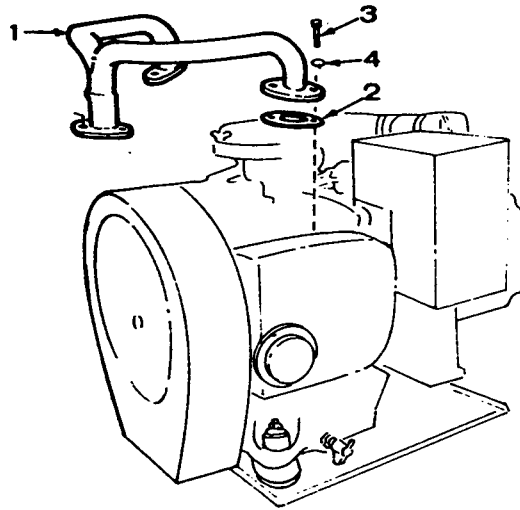


CS-1065

Ref. No.	Part No.	Qty. Used	Part Description
1	821-0008	4	Screw, Cap - Hex Head (1/4 - 20 x 5/16")
2	SCROLL ASSEMBLY		
	134-3149	1	Includes Guard (Prior to 6/83)
	134-3151	1	Excludes Guard (Begin 6/83)
3	815-0261	2	Screw, Cap - Hex Head (1/4 - 20 x 1/2")
4	BACKPLATE, SCROLL		
	134-3257	1	Spec A
	134-3688	1	Begin Spec B
5	815-0261	4	Screw, Cap - Hex Head (1/4 - 20 x 1/2")
6	HOUSING, CYLINDER AIR - LEFT SIDE		
	134-3137	1	Spec A
	134-3701	1	Begin Spec B
7	HOUSING, CYLINDER AIR - RIGHT SIDE		
	134-3480	1	Spec A
	134-3700	1	Begin Spec B
8	GUARD, SCROLL		
	134-3418	1	Screen (Prior to 6/83)
	134-4316	1	Wire (Begin 6/83)
9	815-0421	4	Screw, Self-Tapping - Hex Head - WET ( 10 - 16 x 1/2")



## Exhaust System

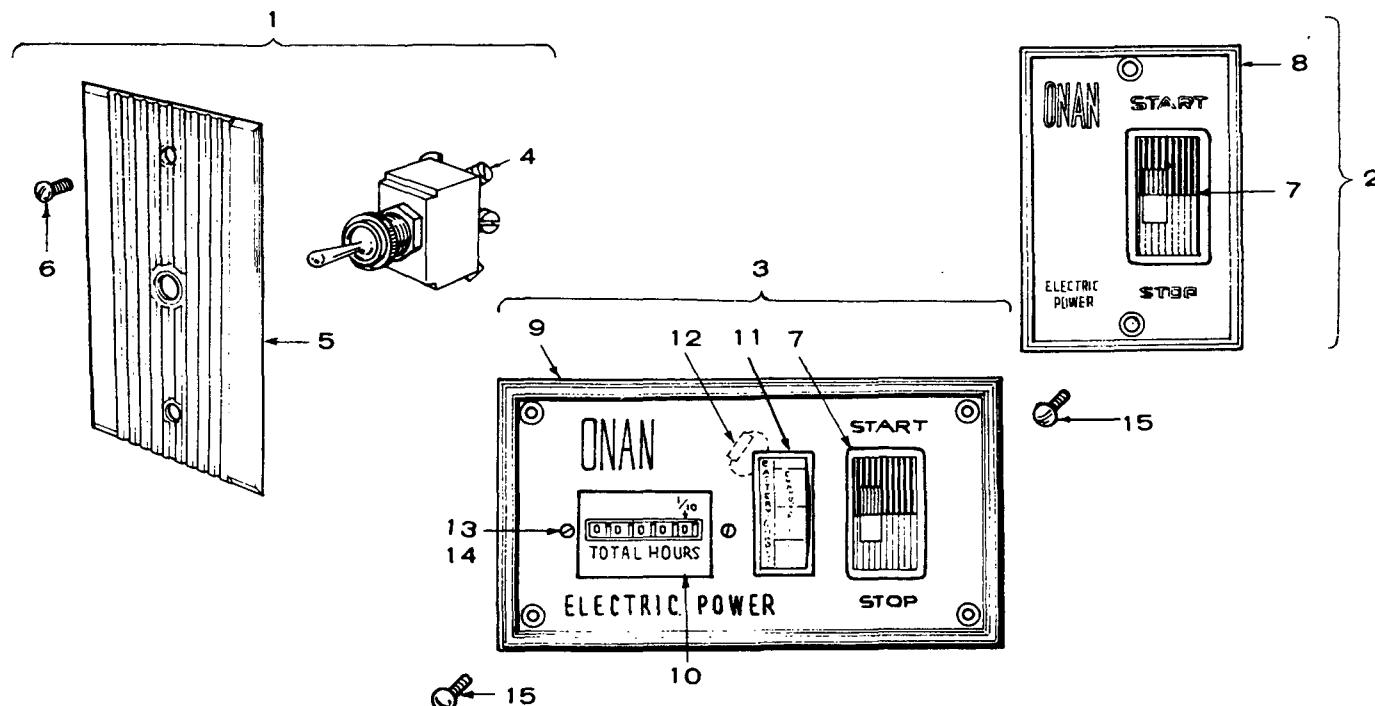


Ref. No.	Part No.	Qty. Used	Part Description
1	154-1947	1	Manifold, Exhaust
2	154-1725	2	Gasket, Exhaust Manifold
3	800-0026	4	Screw, Cap - Hex Head (5/16-18 x 3/4" lg)
4	850-0045	4	Washer, Lock - Spring (5/16")

## Optional Equipment Parts Section

This section contains illustrated parts listings of factory installed options for these Generator Sets. Options may not be applicable to all models; for field conversions, additional parts are usually required. Optional parts listed in this section are in addition or in place of those shown in the standard Generator Set parts section.

## Optional Remote Starting Control



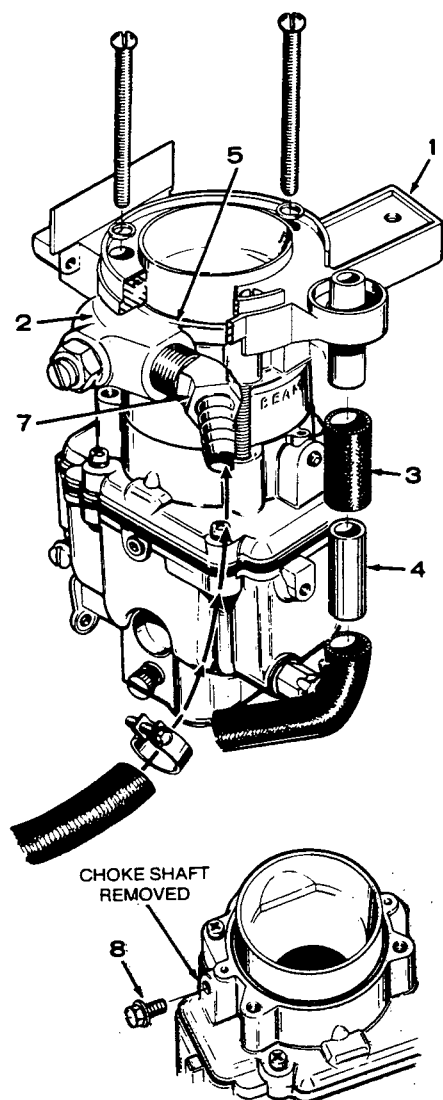
Ref. No.	Part No.	Qty. Used	Part Description
NOTE: This group consists of three types of Control Packages. Use applicable control package when ordering components.			
1	308-0165	1	Control Package, Remote Starting (Includes Parts Marked *)
2	300-0985	1	Control Package, Remote Starting (Includes Parts Marked +)
3	300-0986	1	Control Package, Remote Starting Deluxe (Includes Parts Marked †)
4	308-0154	1	*Switch, Toggle (SPDT)
5	308-0168	1	*Plate, Mounting
6	815-0385	2	*Screw, Machine - Round Head (#6-32 x 1/2")
7	308-0341	1	+†Switch, Rocker with Light
8	301-3566	1	+Panel, Control
9	301-3606	1	†Panel, Control
10	302-0885	1	†Meter, Time Totalizing
11	302-0888	1	†Meter, Battery Condition
12	359-0034	1	†Diode and Lead
13	815-0385	2	†Screw, Machine - Round Head (#6-32 x 1/2")
14	860-0005	2	†Nut, Hex (#6-32)
15	815-0380	2	Screw, Tapping (#5 x 1/2")
HARNESS, WIRING - REMOTE (Not Shown)			
	338-1080	1	10 Feet Long
	338-1081	1	30 Feet Long
	338-1082	1	6 Inches Long

\* - Parts Included in 308-0165 Control Package.

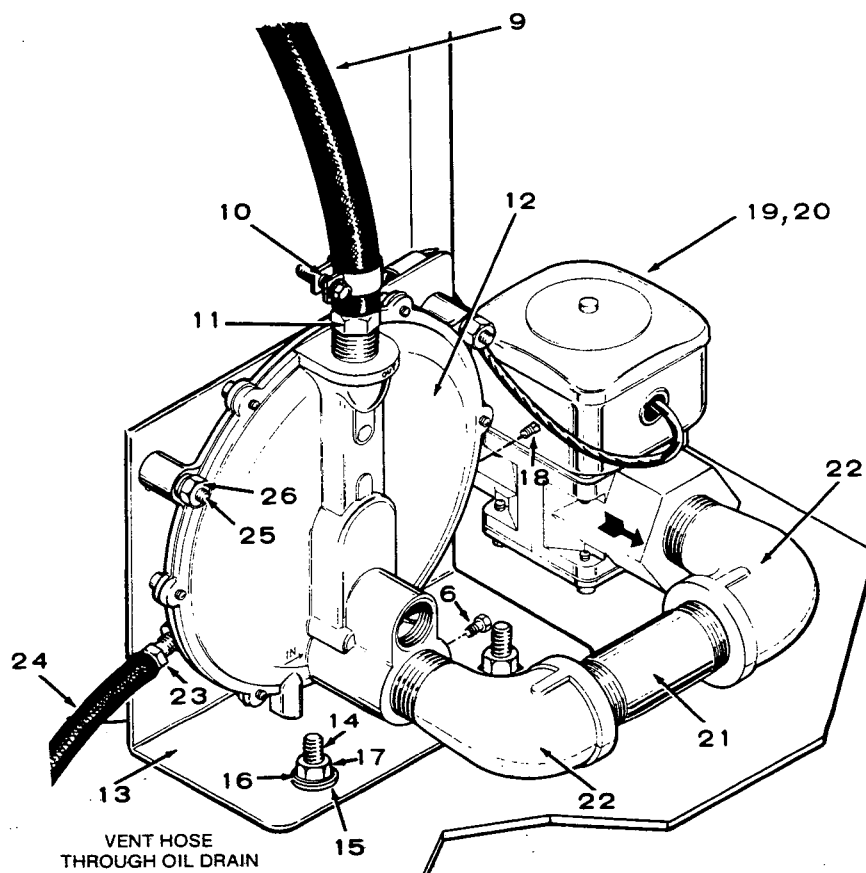
+ - Parts Included in 300-0985 Control Package.

† - Parts Included in 300-0986 Deluxe Control Package.

Optional  
LP Fuel System  
Begin Spec B  
5.0 BGA



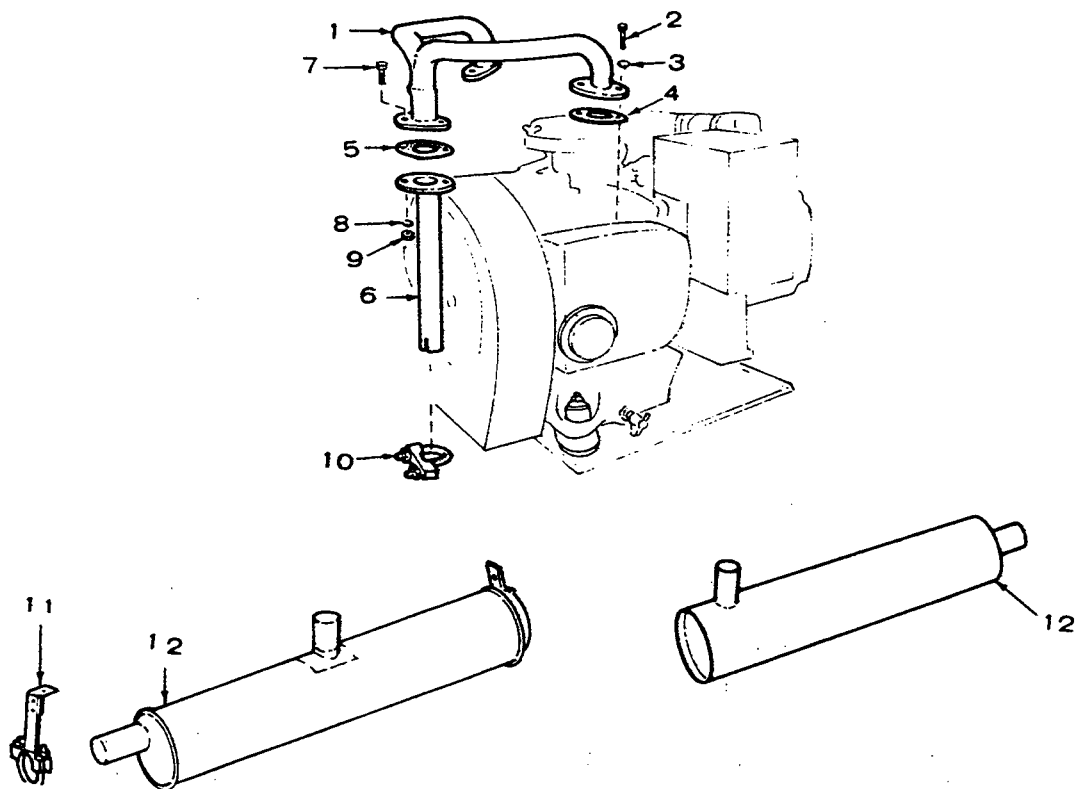
HOSE TO CARBURETOR  
FUEL INLET



**Optional  
LP Fuel System  
Begin Spec B  
5.0 BGA**

<b>Ref. No.</b>	<b>Part No.</b>	<b>Qty. Used</b>	<b>Part Description</b>
1	140-1719	1	Adapter, Air Duct
2	148-0840	1	Adapter, Carburetor (Includes Gaskets, Screws, 3-#10 Lock Washers)
3	503-1039	1	Hose, Breather (7/16 x 1-1/2")
4	123-1484	1	Tube, Breather (Copper)
5	509-0145	1	Seal, O-Ring
6	502-0028	1	Plug, Pipe - Hex Head (1/8")
7	502-0575	1	Elbow, Hose - 45°
8	815-0389	1	Screw, Thd. Form Choke Shaft Hole (1/4-20 x 5/8")
9	503-1048	1	Hose, Fuel (1/2" ID x 30" Lg)
10	503-0032	2	Clamp, Hose
11	502-0238	1	Connector, Hose (1/2")
12	148-0311	1	Regulator, Gas
13	148-0852	1	Bracket
14	800-0008	2	Screw, HHC (1/4-20 x 1-1/4")
15	526-0018	2	Washer, Flat (17/64" ID x 5/8" OD x 1/16" Thk)
16	850-0040	2	Washer, Lock (1/4")
17	862-0001	2	Nut, Hex (1/4-20)
18	505-0057	1	Plug, Square Hd (1/8")
19	307-1881	1	Solenoid Assembly
20	307-0312	1	Valve, Magnetic
21	505-0332	1	Nipple, Pipe (3/4 x 3" Lg)
22	505-0051	2	Elbow, Street (90° x 3/4")
23	502-0395	1	Connector, Vent Hose (1/4")
24	503-1016	1	Hose, Oil (1/2" ID x 12")
25	800-0028	2	Screw, HHC (5/16-18 x 1")
26	870-0257	2	Nut, Hex (5/16-18)

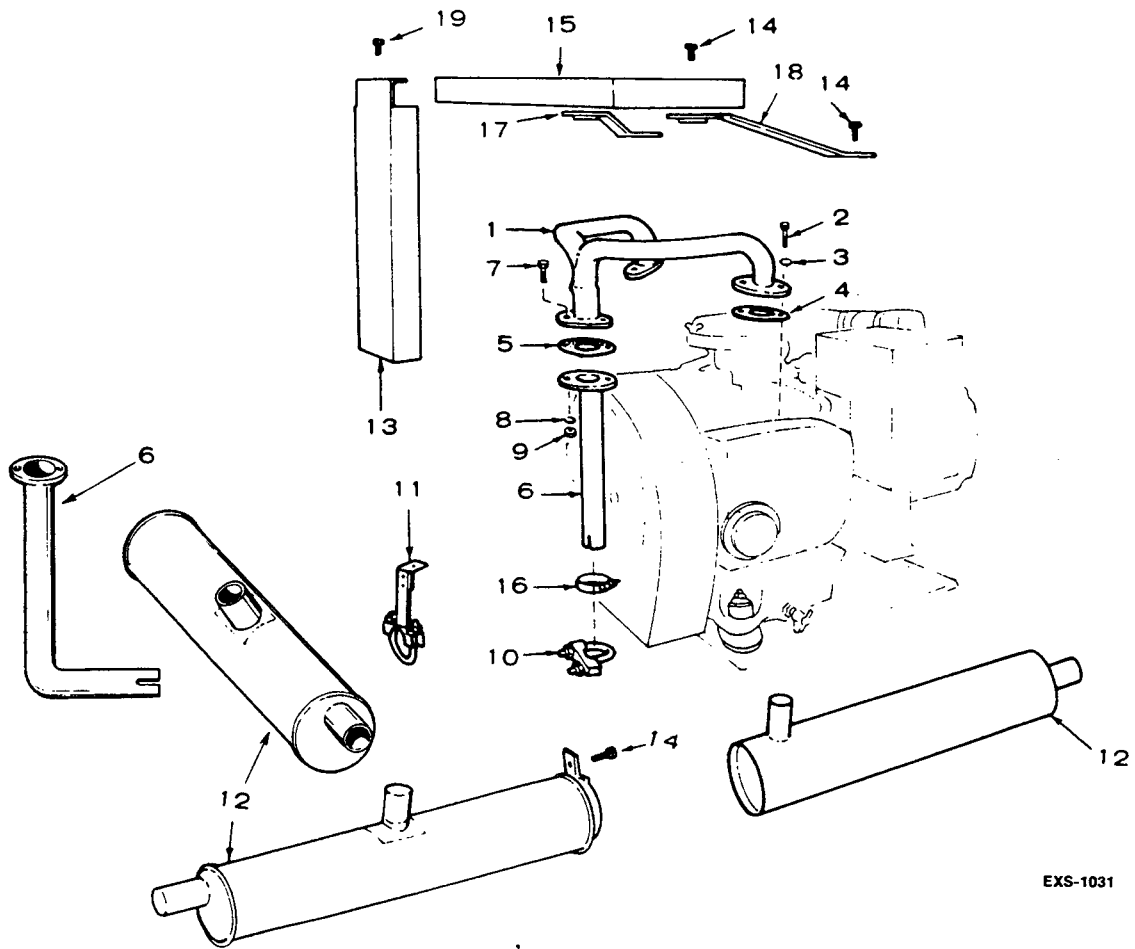
**Optional  
Exhaust System  
(Non-UL Listed and CSA Certified)**



**Optional  
Exhaust System  
(Non-UL Listed and CSA Certified)**

<b>Ref. No.</b>	<b>Part No.</b>	<b>Qty. Used</b>	<b>Part Description</b>
1	154-1947	1	Manifold, Exhaust
2	800-0026	4	Screw, Cap - Hex Head (5/16-18 x 3/4")
3	850-0045	4	Washer, Lock - Spring (5/16")
4	154-1725	2	Gasket, Exhaust Manifold
5	154-2061	1	Gasket, Exhaust
6	TUBE, EXHAUST		
			Spec A
	154-1917	1	17" Long
	154-2017	1	14" Long
			Begin Spec B
	154-2167	1	15-1/2" Long
	154-2143	1	12-1/2" Long
7	800-0030	2	Screw, Cap - Hex Head (5/16-18 x 1-1/4" lg)
8	850-0045	2	Washer, Lock - Spring (5/16")
9	862-0015	2	Nut, Hex (5/16-18)
10	155-1239	1	Clamp, Muffler
11	155-1234	1	Hanger, Muffler
12	MUFFLER, EXHAUST		
	155-1258	1	End Inlet
	155-1520	1	Center Inlet - Optional

**Optional  
Exhaust System  
(UL Listed and CSA Certified)**



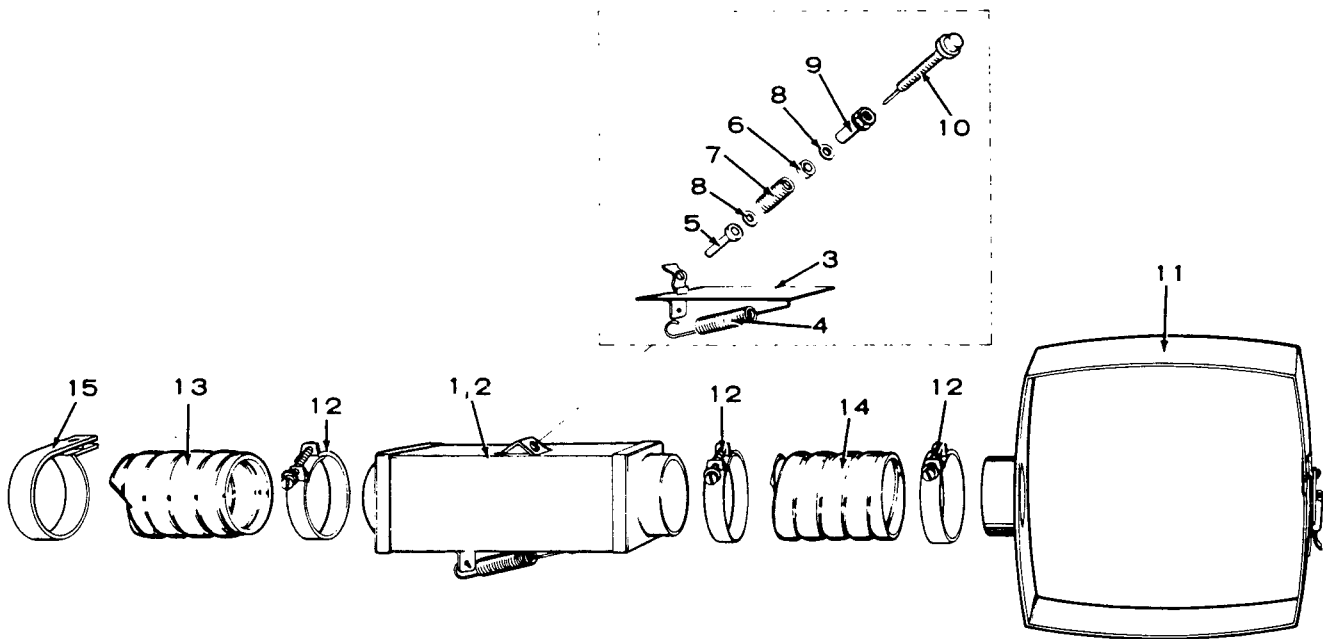
EXS-1031



**Optional  
Exhaust System  
(UL Listed and CSA Certified)**

Ref. No.	Part No.	Qty. Used	Part Description
1	MANIFOLD, EXHAUST		
	154-1947	1	Prior to 6/83
	154-2425	1	Includes Heat Shield(Begin 6/83)
2	800-0026	4	Screw, Cap-Hex Head (5/16-18 x 3/4)
3	850-0045	4	Washer, Lock-Spring(5/16")
4	154-1725	2	Gasket, Exhaust Manifold
5	154-2061	1	Gasket, Exhaust Tube
6	TUBE, EXHAUST		
			Spec A
	154-1917	1	17" Long
	154-2017	1	14" Long
			Begin Spec B
	154-2167	1	15-1/2" Long (Straight)
	154-2143	1	12-1/2" Long (Straight)
	154-2226	1	90° Bend-With Attached Clamp (4" Long)
	154-2554	1	90° Bend-With Attached Clamp (18" Long)
7	800-0030	2	Screw, Cap-Hex Head (5/16-18 x 1 1/4" Long)
8	850-0045	2	Washer, Lock-Spring(5/16")
9	862-0015	2	Nut, Hex (5/16-18")
10	CLAMP, MUFFLER		
	155-1015	1	1 1/2" Diameter
	155-1239	1	1 5/8" Diameter
11	155-1234	1	Hanger, Muffler
12	MUFFLER, EXHAUST		
	155-1258	1	End Inlet
	155-1520	1	Center Inlet (Used with Straight Exhaust Tube)
	155-1910	1	Center Inlet (Used With 90° Bend Exhaust Tube)
13	SHIELD, HEAT		
	154-1980	1	Spec A
	154-2146	1	Begin Spec B
14	821-0010	3	Screw, Cap-Hex Head Locking (1/2-20 x 1/2)
15	154-1972	1	Shield, Heat(Prior to 6/83)
16	503-0107	1	Clamp, Shield To Exhaust Tube
17	154-1883	1	Bracket, Heat Shield-Left Side(Prior to 6/83)
18	154-1886	1	Bracket, Heat Shield-Right Side(Prior To 6/83)
19	821-0010	1	Screw, Cap-Locking Head(1/2-20 x 1/2")

## Optional Carburetor Air Preheater



FS 1077

Ref. No.	Part No.	Qty. Used	Part Description
1	140-1673	1	Kit, Carburetor Air Preheater
	140-0788	1	Control, Air Temperature (Includes Parts Marked *)
2	140-0785	1	*Housing, Control
3	140-0782	1	*Shutter
4	140-0786	1	*Spring, Shutter Return
5	140-0784	1	*Plunger
6	140-0808	1	*Spacer, Vernatherm
7	140-0787	1	*Spring, Vernatherm
8	518-0205	2	*Ring, Retaining
9	870-0195	1	*Nut
10	309-0181	1	*Vernatherm
11	140-1672	1	Wrapper, Air Cleaner
12	503-0004	3	Clamp, Hose
13	503-0981	1	Hose, Duct
14	503-0980	1	Hose, Duct
15	332-2247	1	Clamp, Loop

\* - Parts Included in 140-0788 Air Temperature Control.

### Paint

Ref. No.	Part No.	Qty. Used	Part Description
	525-0137	1	Paint, Touch-up (Non-Metallic Green) - 13 oz. Pressurized Can
	525-0305	1	Paint, Touch-up (Metallic Green) - 13 oz. Pressurized Can